

SEQUENCE LISTING

<110> Biosyn Arzneimittel GmbH

<120> Nucleic acid molecule comprising a nucleic acid sequence which codes for a haemocyanin, and comprising at least one intron sequence

<130> PCT1220-01966

<140> PCT/EP00/08129

<141> 2000-08-21

<160> 239

<170> PatentIn Ver. 2.1

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<213> *Haliotis tuberculata*

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<213> *Haliotis tuberculata*

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<213> *Haliotis tuberculata*

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<213> *Haliotis tuberculata*

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<213> *Haliotis tuberculata*

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<213> *Haliotis tuberculata*

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atacagttgg	tgttgacaca	acaagaagcg	tccgtcaaga	actgtatgaa	gctcctggat	480
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gcgagccata	tggtatggcg	tactccggtt	acactactta	tgatccaatt	ttctacctcc	660
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aaccttacaa	ttccgccaac	tgcgccattg	cttctatgag	aaaaccctta	caaccctttg	780
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tctttgatta	caagaacaac	ttcaattatg	aatatgacac	ccttgacttc	aacggactat	900
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gatttttgct	gcatgggtatt	cagcagtctg	cactagttaa	attctttgtc	tgcaaatcag	1020
atgatgactg	tgaccactat	gctgggtgaat	tctacatcct	tggtgatgaa	gctgaaatgc	1080
catggggcta	tgatcgctct	tacaaatatg	agatcactga	gcagctcaat	gccctggatc	1140
tacacatcgg	agatagattc	ttcatcagat	acgaagcggt	tgatcttcat	ggtacaagtc	1200
ttggaagcaa	catcttcccc	aaaccttctg	tcatacatga	cgaaggggca	g	1251

<210> 11
 <211> 1244
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 11
 gtcaccatca ggctgacgag tacgacgaag ttgtaactgc tgcaagccac atcagaaaga 60
 atttaaaaga tctgtcaaag ggagaagtag agagcctaag gtctgccttc ctgcaacttc 120
 agaacgacgg agtctatgag aatattgccca agttccacgg caagcctggg ttgtgtgatg 180
 ataacggtcg caagggttggc tgttgtgtcc atggaatgcc caccttcccc cagtggcaca 240
 ggctctatgt cctccagggtg gagaatgctt tgctggagag aggatctgcc gtctctgtgc 300
 catactggga ctggactgaa acattttacag agctgccatc tttgattgct gaggctacct 360
 atttcaattc cgttcaaca acgtttgacc ctaatccttt ctccagaggt aaaatcagtt 420
 ttgagaatgc tgttacaaca cgtgatcccc agcctgagct gtacgttaac aggtactact 480
 accaaaaagt catgttgggt tttgaacagg acaactactg cgacttcgag atacagtttg 540
 agatggttca caatgtttct catgcttggc ttggtggaag agctacttat tctatttctt 600
 ctcttgatta ttctgcattc gaccctgtgt ttttcttca ccatgcgaac acagatagat 660
 tgtgggcat ctggcaggag ctgcagaggt acaggaagaa gccatacaat gaagcggatt 720
 gtgccattaa cctaattgcgc aaacctctac atcccttcga caacagtgat ctcaatcatg 780
 atcctgtaac ctttaaatac tcaaaaccca ctgatggctt tgactaccag aacaactttg 840
 gatacaagta tgacaacctt gaggttcaatc atttcagtat tcccaggctt gaagaaatca 900
 ttcgtattag acaacgtcaa gatcgtgtgt ttgcaggatt cctccttcac aacattggga 960
 catccgcaac tgttgagata ttctgtgtg tccctaccac cagcgggtgag caaaactgtg 1020
 aaaacaaagc cgggaacattt gccgtactcg gaggagaaac agagatggcg tttcattttg 1080
 acagactcta caggtttgac atcagtgaac cactgaggga cctcggcata cagctggaca 1140
 gccatgactt tgacctcagc atcaagattc aaggagtaaa tggatcctac cttgatccac 1200
 acatcctgcc agagccatcc ttgatttttg tgcctggttc aagt 1244

<210> 12
 <211> 1255
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 12
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 ctgacaacca gggagactgc atctctgatc catgctctga aaagtatgca ggaagaccat 120
 tcacctgacg ggttccaagc cattgcctct ttccatgctc tgccaccact ctgcccttca 180
 ccactctgag ctccaccgta tgcttgctgt gtccacggca tggtacatt tcccagtg 240
 cacagattgt aactgtaca gttccaggat gactgagga gacatggagc tacggtaggt 300
 gtaccgtatt gggattggct gcgaccgcag tctcacctac cagagcttgt caccatggag 360
 acataccatg atatttggag taacagagat ttccccaatc ctttctacca agccaatatt 420
 gagtttgaag gagaaaacat tacaacagag agagaagtca ttgcagacaa actttttgtc 480
 aaagggtggc acgtttttga taaactgggt cttcaaaca gccatcctag cgtgagcag 540
 gaaaactact gtgactttga gattcagttt gaaattcttc acaacggcgt tcacacgtgg 600
 gtcggaggca gtcgtacctt ctctatcgga catcttcatt acgcattcta cgacctctt 660
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 cagagagggc tctcgggtga tgaggctcac tgtgctctcg agcaaatgag agaaccattg 780
 aagcctttca gcttcggcgc tctttataac tggaatcagc tcacacagga tttctcccga 840
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 ttctgtgggt tctgttgag tggattcgga ggttcgcag cagttaattt ccaggtttgt 1020
 agagctgatt ccacatgtca ggatgctggg tacttcaccg ttcttggtgg cagtgtgag 1080
 atggcgtggg catttgacag gctttacaaa tatgacatta ctgaaactct ggagaaaatg 1140
 caccttcgat atgatgatga cttcacatc tctgtcagtc tgaccgcaa caacggaact 1200
 gtcctgagca gcagtctaac cccaacaccg agtgtcatat tccagcgggg acatc 1255

<210> 13
 <211> 1248
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 13
 gtgacataaa taccaggagc atgtcaccga accgtgttcg ccgtgagctg agcgatctgt 60
 ctgcgaggga cctgtctagt ctcaagtctg ctctgcgaga cctacaggag gatgatggcc 120
 ccaacggata ccaggctctt gcagccttcc atgggctacc agcaggctgc catgatagcc 180
 ggggaaatga gatcgcatgt tgcattcacg ggatgccgac cttccccag tggcacagac 240
 tgtacaccct gcagttggag atggctctga ggagacatgg atcatctgtc gccatcccct 300
 actgggactg gacaaagcct atctccgaac tcccctcgct cttcaccagc cctgagtatt 360
 atgacccatg gcatgatgct gtggtaaaca acccattctc caaaggtttt gtcaaatttg 420
 caaataccta cacagtaaga gaccacagg agatgctgtt ccagctttgt gaacatggag 480
 agtcaatcct ctatgagcaa actcttcttg ctcttgagca aaccgactac tgtgattttg 540
 aggtacagtt tgaggtcctc cataacgtga tccactacct tgttggtgga cgtcagacct 600
 acgcattgtc ttctctgcat tatgcctcct acgacccatt cttctttata caccattcct 660
 ttgtggataa gatgtgggta gtatggcaag ctcttcaaaa gaggaggaaa cttccataca 720
 agcgagctga ctgtgctgtc aacctaatga ctaaaccaat gaggccattt gactccgata 780
 tgaatcagaa cccattcaca aagatgcacg cagttcccaa cacactctat gactacgaga 840
 cactgtacta cagctacgat aatctcgaaa taggtggcag gaatctcgac cagcttcagg 900
 ctgaaattga cagaagcaga agccacgacg gcgtttttgc tggattcttg cttcgtggaa 960
 tcggaacttc ttctgatgct aggtttttgga tttgtagaaa tgaaaatgac tgccacaggg 1020
 gtggaataat ttctatctta ggtggagcca aggaaatgcc atggtcattt gacagaaact 1080
 tcaagtttga tatcaccat gtactcgaga atgctggcat tagcccagag gacgtgtttg 1140
 atgctgagga gccattttat atcaaggttg agatccatgc tgttaacaag accatgatac 1200
 cgctgctctg gatcccagcc ccaactatca tctattctcc tggggaag 1248

<210> 14
 <211> 1207
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 14
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 tcacgaccct cactgtgtct gagaccgaga acctaagaca ggctcttcaa ggtgtcatcg 120
 atgatactgg tcccaatggg taccaagcaa tagcatcctt ccacggaagt cctccaatgt 180
 gcgagatgaa cggccgcaag gttgcctggt gtgctcacgg tatggcctcc ttcccacact 240
 ggcacagact gtatgtgaag cagatggaag atgcctggc tgaccacggg tcacatatcg 300
 gcatccctta ctgggacttg acaactgcct tcacagagtt acccgccctt gtcacagact 360
 ccgagaacaa tcccttccat gagggtcgca ttgatcatct cgggtgtaacc acgtcacgtt 420
 cccccagaga catgctgttt aacgacccag agcaaggatc agagtcgttc ttctatagac 480
 aagtcctcct ggctttggag cagactgact actgccagtt cgaagtccag tttgagctga 540
 cccacaacgc cattcactcc tggacagggt gacgtagccc ttacggaatg tcgaccctcg 600
 agttcacagc ctacgatcct ctcttctggc ttcaccactc caacaccgac agaactctggg 660
 ctgtctggca agcactgcag aaataccgag gactcccata caacgaagca cactgtgaaa 720
 tccaggttct gaaacagccc ttgaggccat tcaacgatga catcaaccac aatccaatca 780
 ccaagactaa tgccaggcct atcgattcat ttgattatga gaggtttaac tatcagtatg 840
 acacccttag cttccatggt aagagcatcc ctgaactgaa tgacctgctc gaggaaagaa 900
 aaagagaaga gagaacattt gctgccttcc ttcttcgtgg aatcggttgc agtgctgatg 960
 tcgtctttga catctgccgg cccaatgggt actgtgtctt tgcagggaacc tttgctgtgc 1020
 tgggagggga gctagaaatg ccttggctct tcgacagact gttccgctat gacatcacca 1080
 gagtcatgaa tcagctccat ctccagtatg attcagattt cagtttcagg gtgaagcttg 1140
 ttgccaccaaa tggcactgag ctttcatcag accttctcaa gtcaccaaca attgaacatg 1200
 aacttg 1207

<210> 15
 <211> 1546
 <212> DNA
 <213> *Haliotis tuberculata*

 <220>
 <221> misc_feature
 <222> (1273)..(1273)
 <223> "n" is a, g, c, or t, including c or t

<400> 15
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 acacttttcat cgtaaggaag ttgattcgct gtccctggat gaagcaaaca acttgaagaa 120
 tgcccttttac aagctacaga acgaccacag tctaacggga tacgaagcaa tctctggtta 180
 ccatggatac cccaatctgt gtccggaaga aggcgatgac aaaatacccc tgctgcgtcc 240
 ccggatgggc atcttttctt actggcacag actcttgacc attcaactgg aaagagctct 300
 tgagcacaat ggtgcactgc ttggtgttcc ttactgggac tggacaagg accctgtcgtc 360
 actgccggcg ttcttctccg actccagcaa caacaatccc tacttcaagt accacatcgc 420
 cgggtgttggc cagcacaccg tcagagagcc aactagtctt atatataacc agccccaat 480
 ccatggttat gattatctct attacctagc attgaccacg cttgaagaaa acaattactg 540
 ggactttgag gttcagtatg agatcctcca caacgccgtc cactcctggc ttggaggatc 600
 ccagaagtat tccatgtcta ccctggagta ttccgctttt gacctgtct ttatgatcct 660
 tcaactgggt ctagacagac tttggatcat ctggcaagaa cttcagaaga tcaggagaaa 720
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 ctatccatct atcaaccagg acgagttcac ccgtgccaac tccaagcctt ctacagtttt 840
 tgacagccat aagttcggct accattacga taacctgaat gttagaggtc acagcatcca 900
 agaactcaac acaatcatca atgacttgag aaacacagac agaactctac caggatttgt 960
 tttgtcaggc atcggtagct ctgctagtgt caagatctat ctccgaacag atgacaatga 1020
 cgaagaagtt ggaactttca ctgtcctggg aggagagagg gaaatgccat gggcctacga 1080
 gcgagttttt aagtatgaca tcacagaggt tgcagataga cttaaaatta agttatgggg 1140
 acacccttta acttccggaa ctggagatca catccttacg aatggaatcg gtggtaaaaa 1200
 agagcctacc caaatccttt catcatctac agacctgcca atcatgacta cgatgttctt 1260
 gttatcccag tanggaagaa accttcacat cctcccaaaa gttgtcgtca agaaaggcac 1320
 ccgcacagag ttccaccacg tcgatgattc agttacgaga ccagttgttg atcttggaa 1380
 ctacactgca ctcttcaact gtgtggtacc accgttcaca taccacggat tcgaactgaa 1440
 ccacgtctat tctgtcaagc ctggtgacta ctatgttact ggaccacga gagaccttg 1500
 ccagaatgca gatgtcagga ttcatatcca tgttgaggat gagtaa 1546

<210> 16
 <211> 967
 <212> DNA
 <213> *Megathura crenulata*

<400> 16
 ggctaccgt actgggactg gactgaaccc atgacacaca ttccgggtct ggcaggaaac 60
 aaaacttatg tggattctca tgggtgcattc cacacaaatc cttttcatag ttcagtgatt 120
 gcattttgaag aaaatgctcc ccacaccaa agacaaatag atcaaagact ctttaaacc 180
 gctacctttg gacaccacac agacctgttc aaccagattt tgtatgcctt tgaacaagaa 240
 gattactgtg actttgaagt ccaatttgag attaccata acacgattca cgcttgga 300
 ggagggaagc aacattttct aatgtcgtcc ctacattaca cagctttcga tctttgttt 360
 tactttcacc attctaactg tgatcgtctt tgggcccgtt ggcaagcctt acagatgaga 420
 cggcataaac cctacagggc ccaactgcgc atatctctgg aacatagca tctgaaacca 480
 ttgcctttt catctcccct taacaataac gaaaagactc atgccaatgc catgccaaac 540
 aagatctacg actatgaaaa tgcctccat tacacatacg aagatttaac atttgaggc 600
 atctctctgg aaaacataga aaagatgac cagcaaaacc agcaagaaga cagaatata 660
 gccggtttt tcttggttgg catacgtact tcagcaaatg ttgatattt cattaaaact 720
 accgattccg tgcaacataa ggctggaaca tttgcagtgc tcggtggaag caaggaaatg 780
 aagtgggagt ttgatcgcgt tttcaagttt gacatcacgc acgttttgaa agatctcgat 840
 ctcactgctg atggcgattt cgaagttact gttgacatca ctgaagtcga tggaaactaaa 900
 cttgcatcca gtcttattcc acatgcttct gtcattcgtg agcatgcacg tggtaagctg 960
 aatagag 967

<210> 17
 <211> 1242
 <212> DNA
 <213> Megathura crenulata

<400> 17
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 cccaggagat gaatgaactt cgtaaagccc tagccttact gaaagaggac aaaagtgccg 120
 gtggatttca gcagcttggt gcattccatg gggagccaaa atggtgtcct agtcccgaag 180
 catctaaaaa atttgcctgc tgtgttcacg gcatgtctgt gttccctcac tggcatcgac 240
 tgttgacgggt tcagagtga aaatgctttga gacgacatgg ctacgatgga gctttgccgt 300
 actgggattg gacctctcct cttaatcacc ttcccgaact ggcagatcat gagaagtacg 360
 tcgaccctga agatggggta gagaagcata acccttggtt cgatgggtcat atagatacag 420
 tcgacaaaac aacaacaaga agtgttcaga ataaactcct cgaacagcct gagtttggtc 480
 attatacaag cattgccaaa caagtactgc tagcgttgga acaggacaat ttctgtgact 540
 ttgaaatcca atatgagatt gcccataact acatccatgc actttagtagga ggcgtcagc 600
 cttatgggtat ggcacgtcct cgctacactg cttttgatcc actattctac ttgcatcact 660
 ctaatacaga tcgtatatgg gcaatatggc aggctttaca gaagtacaga ggaaaaccgt 720
 acaacgttgc taactgtgct gttacatcga tgagagaacc tttgcaacca tttggcctct 780
 ctgccaatat caacacagac catgtaacca aggagcattc agtgccattc aacgtttttg 840
 attacaagac caatttcaat tatgaatatg acacttttga atttaacgggt ctctcaatct 900
 ctcagttgaa taaaaagctc gaagcgataa agagccaaga caggttcttt gcaggcttcc 960
 tgttatctgg tttcaagaaa tcatctcttg ttaaattcaa tatttgacc gatagcagca 1020
 actgtcaccc cgctggagag ttttaccttc tgggtgatga aaacgagatg ccatgggcat 1080
 acgatagagt cttcaaatat gacataaccg aaaaactcca cgatctaaag ctgcatgcag 1140
 aagaccactt ctacattgac tatgaagtat ttgaccttaa accagcaagc ctgggaaaag 1200
 atttgttcaa gcagccttca gtcattcatg aaccaagaat ag 1242

<210> 18
 <211> 1236
 <212> DNA
 <213> Megathura crenulata

<400> 18
 gtcaccatga aggcgaagta tatcaagctg aagtaacttc tgccaaccgt attcgaaaaa 60
 acattgaaaa tctgagcctt ggtgaactcg aaagtctgag agctgccttc ctggaaattg 120
 aaaacgatgg aacttacgaa tcaatagcta aattccatgg tagccttggt ttgtgccagt 180
 taaatggtaa ccccatctct tgttgtgtcc atggcatgcc aactttccct cactggcaca 240
 gactgtacgt ggttgtcgtt gagaatgccc tectgaaaaa aggatcatct gtagctgttc 300
 cctattggga ctggacaaaa cgaatcgaac atttacctca cctgatttca gacgccactt 360
 actacaattc caggcaacat cactatgaga caaaccatt ccatcatggc aaaatcacac 420
 acgagaatga aatcactact agggatccca aggacagcct cttccattca gactactttt 480
 acgagcaggt cctttacgcc ttggagcagg ataacttctg tgatttcgag attcagttgg 540
 agatattaca caatgcattg cattctttac ttggtggcaa aggtaaatat tccatgtcaa 600
 accttgatta cgctgctttt gatcctgtgt tcttccttca tcacgcaacg actgacagaa 660
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 aggcaacgaa aacgcagtc actccacatg atggttttga atatcaaac agctttgggt 840
 atgcttacga taatctggaa ctgaatcact actcgattcc tcagcttgat cacatgctgc 900
 aagaaagaaa aaggcatgac agagtattcg ctggcttcc ccttcacaat attggaacat 960
 ctgccgatgg ccatgtatct gtatgtctcc caactgggga acacacgaag gactgcagtc 1020
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 gactttacaa acttgacata actaaagcct tgaaaaagaa cgggtgtgcac ctgcaagggg 1140
 atttcgatct ggaaattgag attacggctg tgaatggatc tcatctagac agtcatgtca 1200
 tccactctcc cactatactg tttgaggccg gaacag 1236

<210> 19
 <211> 241
 <212> DNA
 <213> Megathura crenulata

<400> 19
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 aattggacaa gcgtcaacaa ctgtcactgg tgaaagccct cgagtccatg aaagccgacc 120
 attcatctga tgggttccag gcaatcgctt ccttccatgc tcttccctct ctttgtccat 180
 caccagctgc ttcaaagagg tttgcgtgct gcgtccatgg catgccaacc tccccgcaat 240
 g 241

<210> 20
 <211> 949
 <212> DNA
 <213> Megathura crenulata

<400> 20
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 gagacctacc tcgatccagt tactggggaa actaaaaaca accctttcca tcacgccccaa 120
 gtggcggtttg aaaatgggtg aacaagcagg aatcctgatg ccaaactttt tatgaaacca 180
 acttacggag accacactta cctcttcgac agcatgatct acgcatttga gcaggaagac 240
 ttctgcgact ttgaagtcca atatgagctc acgcataatg caatacatgc atgggttggga 300
 ggcaagtcaa agtattcaat gtcttctctt cactacactg cttttgatcc tatattttac 360
 ctccatcact caaatgttga tcgtctctgg gccatttggc aagctcttca aatcaggaga 420
 ggcaagtctt acaaggccca ctgcgctctg tctcaagaaa gagaaccatt aaagcctttt 480
 gcattcagtt cccactgaa caacaacgag aaaacgtacc acaactctgt cccactaac 540
 gtttatgact atgtgggagt tttgcactat cgatatgatg accttcagtt tggcggtatg 600
 accatgtcag aacttgagga atatattcac aagcagacac aacatgatag aacctttgca 660
 ggattcttcc tttcatatat tggaacatca gcaagcgtag atatcttcat caatcgagaa 720
 ggtcatgata aatacaaaagt gggaagtgtt gtagtacttg gtggatccaa agaaatgaaa 780
 tggggctttg atagaatgta caagtatgag atcactgagg ctctgaagac gctgaatgtt 840
 gcagtggatg atgggttcag cattactgtt gagatcaccg atgttgatgg atctccccc 900
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<210> 21
 <211> 760
 <212> DNA
 <213> Megathura crenulata

<400> 21
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 ggggtttcca gcagattgca gcattccacg gagaaccaaa atggtgtcca agccccgaag 180
 cggagaaaaa atttgcatgc tgtgttcacg gaatggctgt tttccctcac tggcacagat 240
 tgctgacagt tcaaggagaa aatgctctga ggaaacatgg ctttactggg ggactgccct 300
 actgggactg gactcgatca atgagcgccc ttccacattt tgttgctgat cctacttaca 360
 atgatgctat ttccagccag gaagaagata acccatggca tcatggtcac atagactctg 420
 ttgggcatga tactacaaga gatgtgcgtg atgatcttta tcaatctcct ggtttcgggtc 480
 actacacaga tattgcacaa caagtccttc tggcctttga gcaggacagt ttctgtgatt 540
 ttgaggtaca atttgaaatt gcccataatt tcatacatgc actgattggg ggtaacgaac 600
 catacagtat gtcactcttg aggtatacta catacagatc aatcttcttc ttgcaccact 660
 ccagtacaga ccgacttttg gccatctggc aagcaatcac tagtgcggcc gcctgcaggt 720
 cgaccataag ggagagctcc caacgcgttg gatgcaatct 760

<210> 22
 <211> 323
 <212> DNA
 <213> Megathura crenulata

<400> 22
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 atatccggga cctctcagag ggagaaattg agagcatcag atctgctttc ctccaaattc 120
 aaaaagaggg tatatatgaa aacattgcaa agttccatgg aaaaccagga ctttgtgaac 180
 atgatggaca tcctgttgct tggtgtgtcc atggcatgcc cacctttccc cactggcaca 240
 gactgtacgt tcttcagggtg gagaatgcgc tcttagaacg aggggtctgca gttgctgttc 300
 cttactggga ctggacccta cct 323

<210> 23
 <211> 988
 <212> DNA
 <213> Megathura crenulata

<400> 23
 atggctgtgt ttccgcactg gcacagactg tttgtgaaac agatggagga cgcacttgct 60
 gctcatggag ctcatattgg cataccatac tgggattgga caagtgcgtt tagtcatctg 120
 cccgccctag tgactgacca cgagaacaat cccttcacc acggccatat tggatcatctg 180
 aatgtggata catctcgatc tccaagagac atgctgttta atgatcctga acaaggctca 240
 gaatcattct tctacagaca ggttctcttg actctagaac agacagactt ctgccaattt 300
 gaagttcagt ttgaacttac acacaatgcc atccactctt ggactggagg acatactcca 360
 tatggaatgt catcactgga atatacagca tatgatccac tcttttatct ccaccattcc 420
 aacactgatc gtatctgggc catctggcag gcactccaga aatatagagg tcttccatac 480
 aacgcagctc actgcgatat ccaagttctg aaacaacctc ttaaaccatt cagcgagtcc 540
 aggaatccaa acccagtcac cagagccaat tctagggccg ttgattcatt tgattatgag 600
 aaattcaatt atcaatatga cacacttacc ttccacggac tttctatccc agaacttgat 660
 gccatgcttc aagagagaaa gaaggaagag agaacatttg cagccttcct gttgcacgga 720
 tttggcgcca gtgctgatgt ttcgtttgat gtctgcacac ctgatgggtca ttgtgccttt 780
 gctggaacct tcgcggtact tgggtggggag cttgagatgc cctgggtcctt tgaaagattg 840
 ttccgttacg atatcacaaa ggttctcaag cagatgaatc ttcactatga ttctgagttc 900
 cactttgagt tgaagattgt tggcacagat ggaacagaac tgccatcgga tcgtatcaag 960
 agccctacca ttgaacacca tggaggag 988

<210> 24
 <211> 310
 <212> DNA
 <213> Megathura crenulata

<400> 24
 gtcacgatca cagtgaacgt cagcatggat ttttcaggaa ggaagtgcgt tccctgtccc 60
 tggatgaagc caatgacctt aaaaatgcac tgtacaagct gcagaatgat caggggtccca 120
 atggatatga atcaatagcc ggttaccatg gctatccatt cctctgccct gaacatgggtg 180
 aagaccagta cgcattgctgt gtccacggaa tgctgtatt tccacattgg cacagacttc 240
 atacaatcca gtttgagaga gctctcaaag aacatgggtc tcatttgggt ctgccatact 300
 gggactggac 310

<210> 25
 <211> 422
 <212> PRT
 <213> Haliotis tuberculata

<220>
 <221> SIGNAL
 <222> (1) .. (15)

<400> 25

Leu Val Gln Phe Leu Leu Val Ala Leu Val Ala Gly Ala Gly Ala Asp
 1 5 10 15
 Asn Val Val Arg Lys Asp Val Ser His Leu Thr Asp Asp Glu Val Gln
 20 25 30
 Ala Leu His Gly Ala Leu His Asp Val Thr Ala Ser Thr Gly Pro Leu
 35 40 45
 Ser Phe Glu Asp Ile Thr Ser Tyr His Ala Ala Pro Ala Ser Cys Asp
 50 55 60
 Tyr Lys Gly Arg Lys Ile Ala Cys Cys Val His Gly Met Pro Ser Phe
 65 70 75 80
 Pro Phe Trp His Arg Ala Tyr Val Val Gln Ala Glu Arg Ala Leu Leu
 85 90 95
 Ser Lys Arg Lys Thr Val Gly Met Pro Tyr Trp Asp Trp Thr Gln Thr
 100 105 110
 Leu Thr His Leu Pro Ser Leu Val Thr Glu Pro Ile Tyr Ile Asp Ser
 115 120 125
 Lys Gly Gly Lys Ala Gln Thr Asn Tyr Trp Tyr Arg Gly Glu Ile Ala
 130 135 140
 Phe Ile Asn Lys Lys Thr Ala Arg Ala Val Asp Asp Arg Leu Phe Glu
 145 150 155 160
 Lys Val Glu Pro Gly His Tyr Thr His Leu Met Glu Thr Val Leu Asp
 165 170 175
 Ala Leu Glu Gln Asp Glu Phe Cys Lys Phe Glu Ile Gln Phe Glu Leu
 180 185 190
 Ala His Asn Ala Ile His Tyr Leu Val Gly Gly Lys Phe Glu Tyr Ser
 195 200 205
 Met Ser Asn Leu Glu Tyr Thr Ser Tyr Asp Pro Ile Phe Phe Leu His
 210 215 220
 His Ser Asn Val Asp Arg Leu Phe Ala Ile Trp Gln Arg Leu Gln Glu
 225 230 235 240
 Leu Arg Gly Lys Asn Pro Asn Ala Met Asp Cys Ala His Glu Leu Ala
 245 250 255
 His Gln Gln Leu Gln Pro Phe Asn Arg Asp Ser Asn Pro Val Gln Leu
 260 265 270
 Thr Lys Asp His Ser Thr Pro Ala Asp Leu Phe Asp Tyr Lys Gln Leu
 275 280 285
 Gly Tyr Ser Tyr Asp Ser Leu Asn Leu Asn Gly Met Thr Pro Glu Gln
 290 295 300
 Leu Lys Thr Glu Leu Asp Glu Arg His Ser Lys Glu Arg Ala Phe Ala
 305 310 315 320

Ser Phe Arg Leu Ser Gly Phe Gly Gly Ser Ala Asn Val Val Val Tyr
 325 330 335

Ala Cys Val Pro Asp Asp Asp Pro Arg Ser Asp Asp Tyr Cys Glu Lys
 340 345 350

Ala Gly Asp Phe Phe Ile Leu Gly Gly Gln Ser Glu Met Pro Trp Arg
 355 360 365

Phe Tyr Arg Pro Phe Phe Tyr Asp Val Thr Glu Ala Val His His Leu
 370 375 380

Gly Val Pro Leu Ser Gly His Tyr Tyr Val Lys Thr Glu Leu Phe Ser
 385 390 395 400

Val Asn Gly Thr Ala Leu Ser Pro Asp Leu Leu Pro Gln Pro Thr Val
 405 410 415

Ala Tyr Arg Pro Gly Lys
 420

<210> 26

<211> 419

<212> PRT

<213> Haliotis tuberculata

<400> 26

Gly His Leu Asp Pro Pro Val His His Arg His Asp Asp Asp Leu Ile
 1 5 10 15

Val Arg Lys Asn Ile Asp His Leu Thr Arg Glu Glu Glu Tyr Glu Leu
 20 25 30

Arg Met Ala Leu Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr
 35 40 45

Gln Ala Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Arg Pro
 50 55 60

Asp Ala Lys Val Arg Phe Ala Cys Cys Met His Gly Met Ala Ser Phe
 65 70 75 80

Pro His Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Val
 85 90 95

Arg Arg Gly Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Lys Pro
 100 105 110

Met Thr His Leu Pro Asp Leu Ala Ser Asn Glu Thr Tyr Val Asp Pro
 115 120 125

Tyr Gly His Thr His His Asn Pro Phe Phe Asn Ala Asn Ile Ser Phe
 130 135 140

Glu Glu Gly His His His Thr Ser Arg Met Ile Asp Ser Lys Leu Phe
 145 150 155 160

Ala Pro Val Ala Phe Gly Glu His Ser His Leu Phe Asp Gly Ile Leu
 165 170 175

Tyr Ala Phe Glu Gln Glu Asp Phe Cys Asp Phe Glu Ile Gln Phe Glu
 180 185 190
 Leu Val His Asn Ser Ile His Ala Trp Ile Gly Gly Ser Glu Asp Tyr
 195 200 205
 Ser Met Ala Thr Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu
 210 215 220
 His His Ser Asn Val Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln
 225 230 235 240
 Ile Arg Arg His Lys Pro Tyr Gln Ala His Cys Ala Gln Ser Val Glu
 245 250 255
 Gln Leu Pro Met Lys Pro Phe Ala Phe Pro Ser Pro Leu Asn Asn Asn
 260 265 270
 Glu Lys Thr His Ser His Ser Val Pro Thr Asp Ile Tyr Asp Tyr Glu
 275 280 285
 Glu Val Leu His Tyr Ser Tyr Asp Asp Leu Thr Phe Gly Gly Met Asn
 290 295 300
 Leu Glu Glu Ile Glu Glu Ala Ile His Leu Arg Gln Gln His Glu Arg
 305 310 315 320
 Val Phe Ala Gly Phe Leu Leu Ala Gly Ile Gly Thr Ser Ala Leu Val
 325 330 335
 Asp Ile Phe Ile Asn Lys Pro Gly Asn Gln Pro Leu Lys Ala Gly Asp
 340 345 350
 Ile Ala Ile Leu Gly Gly Ala Lys Glu Met Pro Trp Ala Phe Asp Arg
 355 360 365
 Leu Tyr Lys Val Glu Ile Thr Asp Ser Leu Lys Thr Leu Ser Leu Asp
 370 375 380
 Val Asp Gly Asp Tyr Glu Val Thr Phe Lys Ile His Asp Met His Gly
 385 390 395 400
 Asn Ala Leu Asp Thr Asp Leu Ile Pro His Ala Ala Val Val Ser Glu
 405 410 415
 Pro Ala His

<210> 27
 <211> 414
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 27
 Pro Thr Phe Glu Asp Glu Lys His Ser Leu Arg Ile Arg Lys Asn Val
 1 5 10 15
 Asp Ser Leu Thr Pro Glu Glu Thr Asn Glu Leu Arg Lys Ala Leu Glu
 20 25 30

Leu Leu Glu Asn Asp His Thr Ala Gly Gly Phe Asn Gln Leu Gly Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Asn Pro Glu Ala Glu His Lys
 50 55 60
 Val Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Ala Leu Gln Ala Glu Asn Ala Leu Arg Lys His Gly Tyr Ser
 85 90 95
 Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser Gln Leu Pro
 100 105 110
 Asp Leu Val Ser His Glu Gln Tyr Thr Asp Pro Ser Asp His His Val
 115 120 125
 Lys His Asn Pro Trp Phe Asn Gly His Ile Asp Thr Val Asn Gln Asp
 130 135 140
 Thr Thr Arg Ser Val Arg Glu Asp Leu Tyr Gln Gln Pro Glu Phe Gly
 145 150 155 160
 His Phe Thr Asp Ile Ala Gln Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175
 Asp Phe Cys Ser Phe Glu Val Gln Tyr Glu Ile Ser His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Thr Asp Ala Tyr Gly Met Ala Ser Leu Arg
 195 200 205
 Tyr Thr Ala Tyr Asp Pro Ile Phe Phe Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ser Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Thr Ala Asn Cys Ala Ile Glu Ser Met Arg Arg Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Ser Ser Ala Ile Asn Pro Asp Arg Ile Thr Arg Glu
 260 265 270
 His Ala Ile Pro Phe Asp Val Phe Asn Tyr Arg Asp Asn Leu His Tyr
 275 280 285
 Val Tyr Asp Thr Leu Glu Phe Asn Gly Leu Ser Ile Ser Gln Leu Asp
 290 295 300
 Arg Glu Leu Glu Lys Ile Lys Ser His Glu Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu Ser Gly Ile Lys Lys Ser Ala Leu Val Lys Phe Glu Val Cys
 325 330 335
 Thr Pro Pro Asp Asn Cys His Lys Ala Gly Glu Phe Tyr Leu Leu Gly
 340 345 350

Asp Glu Asn Glu Met Ala Trp Ala Tyr Asp Arg Leu Phe Lys Tyr Asp
 355 360 365

Ile Thr Gln Val Leu Glu Ala Asn His Leu His Phe Tyr Asp His Leu
 370 375 380

Phe Ile Arg Tyr Glu Val Phe Asp Leu Lys Gly Val Ser Leu Gly Thr
 385 390 395 400

Asp Leu Phe His Thr Ala Asn Val Val His Asp Ser Gly Thr
 405 410

<210> 28

<211> 413

<212> PRT

<213> Haliotis tuberculata

<400> 28

Gly Thr Arg Asp Arg Asp Asn Tyr Val Glu Glu Val Thr Gly Ala Ser
 1 5 10 15

His Ile Arg Lys Asn Leu Asn Asp Leu Asn Thr Gly Glu Met Glu Ser
 20 25 30

Leu Arg Ala Ala Phe Leu His Ile Gln Asp Asp Gly Thr Tyr Glu Ser
 35 40 45

Ile Ala Gln Tyr His Gly Lys Pro Gly Lys Cys Gln Leu Asn Asp His
 50 55 60

Asn Ile Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
 65 70 75 80

Arg Leu Tyr Val Val Gln Val Glu Asn Ala Leu Leu Asn Arg Gly Ser
 85 90 95

Gly Val Ala Val Pro Tyr Trp Glu Trp Thr Ala Pro Ile Asp His Leu
 100 105 110

Pro His Phe Ile Asp Asp Ala Thr Tyr Phe Asn Ser Arg Gln Gln Arg
 115 120 125

Tyr Asp Pro Asn Pro Phe Phe Arg Gly Lys Val Thr Phe Glu Asn Ala
 130 135 140

Val Thr Thr Arg Asp Pro Gln Ala Gly Leu Phe Asn Ser Asp Tyr Met
 145 150 155 160

Tyr Glu Asn Val Leu Leu Ala Leu Glu Gln Glu Asn Tyr Cys Asp Phe
 165 170 175

Glu Ile Gln Phe Glu Leu Val His Asn Ala Leu His Ser Met Leu Gly
 180 185 190

Gly Lys Gly Gln Tyr Ser Met Ser Ser Leu Asp Tyr Ser Ala Phe Asp
 195 200 205

Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
 210 215 220

Trp Gln Glu Leu Gln Arg Phe Arg Glu Leu Pro Tyr Glu Glu Ala Asn
 225 230 235 240
 Cys Ala Ile Asn Leu Met His Gln Pro Leu Lys Pro Phe Ser Asp Pro
 245 250 255
 His Glu Asn His Asp Asn Val Thr Leu Lys Tyr Ser Lys Pro Gln Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn His Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe His His Leu Ser Ile Pro Ser Leu Asp Ala Thr Leu Lys Gln Arg
 290 295 300
 Arg Asn His Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Asp Ile Thr Ile Tyr Ile Cys Leu Pro Asp Gly Arg Arg
 325 330 335
 Gly Asn Asp Cys Ser His Glu Ala Gly Thr Phe Tyr Ile Leu Gly Gly
 340 345 350
 Glu Thr Glu Met Pro Phe Ile Phe Asp Arg Leu Tyr Lys Phe Glu Ile
 355 360 365
 Thr Lys Pro Leu Gln Gln Leu Gly Val Lys Leu His Gly Gly Val Phe
 370 375 380
 Glu Leu Glu Leu Glu Ile Lys Ala Tyr Asn Gly Ser Tyr Leu Asp Pro
 385 390 395 400
 His Thr Phe Asp Pro Thr Ile Ile Phe Glu Pro Gly Thr
 405 410

<210> 29

<211> 420

<212> PRT

<213> *Haliotis tuberculata*

<400> 29

Asp Thr His Ile Leu Asp His Asp His Glu Glu Glu Ile Leu Val Arg
 1 5 10 15

Lys Asn Ile Ile Asp Leu Ser Pro Arg Glu Arg Val Ser Leu Val Lys
 20 25 30

Ala Leu Gln Arg Met Lys Asn Asp Arg Ser Ala Asp Gly Tyr Gln Ala
 35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Asn Pro Ser Ala
 50 55 60

Ala His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln
 65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Val Gln Asp Ala Leu Arg Arg His
 85 90 95

Gly Ser Leu Val Gly Ile Pro Tyr Trp Asp Trp Thr Lys Pro Val Asn
 100 105 110
 Glu Leu Pro Glu Leu Leu Ser Ser Ala Thr Phe Tyr His Pro Ile Arg
 115 120 125
 Asn Ile Asn Ile Ser Asn Pro Phe Leu Gly Ala Asp Ile Glu Phe Glu
 130 135 140
 Gly Pro Gly Val His Thr Glu Arg His Ile Asn Thr Glu Arg Leu Phe
 145 150 155 160
 His Ser Gly Asp His Asp Gly Tyr His Asn Trp Phe Phe Glu Thr Val
 165 170 175
 Leu Phe Ala Leu Glu Gln Glu Asp Tyr Cys Asp Phe Glu Ile Gln Phe
 180 185 190
 Glu Ile Ala His Asn Gly Ile His Thr Trp Ile Gly Gly Ser Ala Val
 195 200 205
 Tyr Gly Met Gly His Leu His Tyr Ala Ser Tyr Asp Pro Ile Phe Tyr
 210 215 220
 Ile His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu
 225 230 235 240
 Gln Lys Tyr Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Ile Glu
 245 250 255
 His Met Arg Thr Pro Leu Lys Pro Phe Ser Phe Gly Pro Pro Tyr Asn
 260 265 270
 Leu Asn Ser His Thr Gln Glu Tyr Ser Lys Pro Glu Asp Thr Phe Asp
 275 280 285
 Tyr Lys Lys Phe Gly Tyr Arg Tyr Asp Ser Leu Glu Leu Glu Gly Arg
 290 295 300
 Ser Ile Ser Arg Ile Asp Glu Leu Ile Gln Gln Arg Gln Glu Lys Asp
 305 310 315 320
 Arg Thr Phe Ala Gly Phe Leu Leu Lys Gly Phe Gly Thr Ser Ala Ser
 325 330 335
 Val Ser Leu Gln Val Cys Arg Val Asp His Thr Cys Lys Asp Ala Gly
 340 345 350
 Tyr Phe Thr Ile Leu Gly Gly Ser Ala Glu Met Pro Trp Ala Phe Asp
 355 360 365
 Arg Leu Tyr Lys Tyr Asp Ile Thr Lys Thr Leu His Asp Met Asn Leu
 370 375 380
 Arg His Glu Asp Thr Phe Ser Ile Asp Val Thr Ile Thr Ser Tyr Asn
 385 390 395 400
 Gly Thr Val Leu Ser Gly Asp Leu Ile Gln Thr Pro Ser Ile Ile Phe
 405 410 415

Val Pro Gly Arg
420

<210> 30

<211> 417

<212> PRT

<213> *Haliotis tuberculata*

<400> 30

His	Lys	Leu	Asn	Ser	Arg	Lys	His	Thr	Pro	Asn	Arg	Val	Arg	His	Glu	
1				5					10					15		
Leu	Ser	Ser	Leu	Ser	Ser	Arg	Asp	Ile	Ala	Ser	Leu	Lys	Ala	Ala	Leu	
			20					25					30			
Thr	Ser	Leu	Gln	His	Asp	Asn	Gly	Thr	Asp	Gly	Tyr	Gln	Ala	Ile	Ala	
		35					40					45				
Ala	Phe	His	Gly	Val	Pro	Ala	Gln	Cys	His	Glu	Pro	Ser	Gly	Arg	Glu	
	50					55					60					
Ile	Ala	Cys	Cys	Ile	His	Gly	Met	Ala	Thr	Phe	Pro	His	Trp	His	Arg	
65					70					75					80	
Leu	Tyr	Thr	Leu	Gln	Leu	Glu	Gln	Ala	Leu	Arg	Arg	His	Gly	Ser	Ser	
			85						90					95		
Val	Ala	Val	Pro	Tyr	Trp	Asp	Trp	Thr	Lys	Pro	Ile	Thr	Glu	Leu	Pro	
			100					105					110			
His	Ile	Leu	Thr	Asp	Gly	Glu	Tyr	Tyr	Asp	Val	Trp	Gln	Asn	Ala	Val	
		115					120					125				
Leu	Ala	Asn	Pro	Phe	Ala	Arg	Gly	Tyr	Val	Lys	Ile	Lys	Asp	Ala	Phe	
	130					135					140					
Thr	Val	Arg	Asn	Val	Gln	Glu	Ser	Leu	Phe	Lys	Met	Ser	Ser	Phe	Gly	
145					150					155					160	
Lys	His	Ser	Leu	Leu	Phe	Asp	Gln	Ala	Leu	Leu	Ala	Leu	Glu	Gln	Thr	
			165					170						175		
Asp	Tyr	Cys	Asp	Phe	Glu	Val	Gln	Phe	Glu	Val	Met	His	Asn	Thr	Ile	
			180					185					190			
His	Tyr	Leu	Val	Gly	Gly	Arg	Gln	Thr	Tyr	Ala	Phe	Ser	Ser	Leu	Glu	
		195					200					205				
Tyr	Ser	Ser	Tyr	Asp	Pro	Ile	Phe	Phe	Ile	His	His	Ser	Phe	Val	Asp	
	210					215					220					
Lys	Ile	Trp	Ala	Val	Trp	Gln	Glu	Leu	Gln	Ser	Arg	Arg	His	Leu	Gln	
225					230					235				240		
Phe	Arg	Thr	Ala	Asp	Cys	Ala	Val	Gly	Leu	Met	Gly	Gln	Ala	Met	Arg	
			245						250					255		
Pro	Phe	Asn	Lys	Asp	Phe	Asn	His	Asn	Ser	Phe	Thr	Lys	Lys	His	Ala	
			260					265					270			

Val Pro Asn Thr Val Phe Asp Tyr Glu Asp Leu Gly Tyr Asn Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ser Gly Leu Asn Leu Asn Glu Ile Glu Ala Leu Ile
 290 295 300
 Ala Lys Arg Lys Ser His Ala Arg Val Phe Ala Gly Phe Leu Leu Phe
 305 310 315 320
 Gly Leu Gly Thr Ser Ala Asp Ile His Leu Glu Ile Cys Lys Thr Ser
 325 330 335
 Glu Asn Cys His Asp Ala Gly Val Ile Phe Ile Leu Gly Gly Ser Ala
 340 345 350
 Glu Met His Trp Ala Tyr Asn Arg Leu Tyr Lys Tyr Asp Ile Thr Glu
 355 360 365
 Ala Leu Gln Glu Phe Asp Ile Asn Pro Glu Asp Val Phe His Ala Asp
 370 375 380
 Glu Pro Phe Phe Leu Arg Leu Ser Val Val Ala Val Asn Gly Thr Val
 385 390 395 400
 Ile Pro Ser Ser His Leu His Gln Pro Thr Ile Ile Tyr Glu Pro Gly
 405 410 415
 Glu

<210> 31
 <211> 403
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 31
 Asp His His Asp Asp His Gln Ser Gly Ser Ile Ala Gly Ser Gly Val
 1 5 10 15
 Arg Lys Asp Val Asn Thr Leu Thr Lys Ala Glu Thr Asp Asn Leu Arg
 20 25 30
 Glu Ala Leu Trp Gly Val Met Ala Asp His Gly Pro Asn Gly Phe Gln
 35 40 45
 Ala Ile Ala Ala Phe His Gly Lys Pro Ala Leu Cys Pro Met Pro Asp
 50 55 60
 Gly His Asn Tyr Ser Cys Cys Thr His Gly Met Ala Thr Phe Pro His
 65 70 75 80
 Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Met Arg Ala His
 85 90 95
 Gly Ser His Val Gly Leu Pro Tyr Trp Asp Trp Thr Ala Ala Phe Thr
 100 105 110
 His Leu Pro Thr Leu Val Thr Asp Thr Asp Asn Asn Pro Phe Gln His
 115 120 125

Gly His Ile Asp Tyr Leu Asn Val Ser Thr Thr Arg Ser Pro Arg Asp
 130 135 140
 Met Leu Phe Asn Asp Pro Glu His Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Phe Cys Lys Phe Glu Val
 165 170 175
 Gln Phe Glu Ile Thr His Asn Ala Ile His Ser Trp Thr Gly Gly His
 180 185 190
 Ser Pro Tyr Gly Met Ser Thr Leu Asp Phe Thr Ala Tyr Asp Pro Leu
 195 200 205
 Phe Trp Leu His His Ser Asn Thr Asp Arg Ile Trp Ala Val Trp Gln
 210 215 220
 Ala Leu Gln Glu Tyr Arg Gly Leu Pro Tyr Asn His Ala Asn Cys Glu
 225 230 235 240
 Ile Gln Ala Met Lys Thr Pro Leu Arg Pro Phe Ser Asp Asp Ile Asn
 245 250 255
 His Asn Pro Val Thr Lys Ala Asn Ala Lys Pro Leu Asp Val Phe Glu
 260 265 270
 Tyr Asn Arg Leu Ser Phe Gln Tyr Asp Asn Leu Ile Phe His Gly Tyr
 275 280 285
 Ser Ile Pro Glu Leu Asp Arg Val Leu Glu Glu Arg Lys Glu Glu Asp
 290 295 300
 Arg Ile Phe Ala Ala Phe Leu Leu Ser Gly Ile Lys Arg Ser Ala Asp
 305 310 315 320
 Val Val Phe Asp Ile Cys Gln Pro Glu His Glu Cys Val Phe Ala Gly
 325 330 335
 Thr Phe Ala Ile Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
 340 345 350
 Arg Leu Phe Arg Tyr Asp Ile Thr Lys Val Met Lys Gln Leu His Leu
 355 360 365
 Arg His Asp Ser Asp Phe Thr Phe Arg Val Lys Ile Val Gly Thr Asp
 370 375 380
 Asp His Glu Leu Pro Ser Asp Ser Val Lys Ala Pro Thr Ile Glu Phe
 385 390 395 400
 Glu Pro Gly

<210> 32
 <211> 511
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 32
 Val His Arg Gly Gly Asn His Glu Asp Glu His His Asp Asp Arg Leu
 1 5 10 15
 Ala Asp Val Leu Ile Arg Lys Glu Val Asp Phe Leu Ser Leu Gln Glu
 20 25 30
 Ala Asn Ala Ile Lys Asp Ala Leu Tyr Lys Leu Gln Asn Asp Asp Ser
 35 40 45
 Lys Gly Gly Phe Glu Ala Ile Ala Gly Tyr His Gly Tyr Pro Asn Met
 50 55 60
 Cys Pro Glu Arg Gly Thr Asp Lys Tyr Pro Cys Cys Val His Gly Met
 65 70 75 80
 Pro Val Phe Pro His Trp His Arg Leu His Thr Ile Gln Met Glu Arg
 85 90 95
 Ala Leu Lys Asn His Gly Ser Pro Met Gly Ile Pro Tyr Trp Asp Trp
 100 105 110
 Thr Lys Lys Met Ser Ser Leu Pro Ser Phe Phe Gly Asp Ser Ser Asn
 115 120 125
 Asn Asn Pro Phe Tyr Lys Tyr Tyr Ile Arg Gly Val Gln His Glu Thr
 130 135 140
 Thr Arg Asp Val Asn Gln Arg Leu Phe Asn Gln Thr Lys Phe Gly Glu
 145 150 155 160
 Phe Asp Tyr Leu Tyr Tyr Leu Thr Leu Gln Val Leu Glu Glu Asn Ser
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn Ala Val His
 180 185 190
 Ser Trp Leu Gly Gly Thr Gly Gln Tyr Ser Met Ser Thr Leu Glu Tyr
 195 200 205
 Ser Ala Phe Asp Pro Val Phe Met Ile His His Ser Ser Leu Asp Arg
 210 215 220
 Ile Trp Ile Leu Trp Gln Lys Leu Gln Lys Ile Arg Met Lys Pro Tyr
 225 230 235 240
 Tyr Ala Leu Asp Cys Ala Gly Asp Arg Leu Met Lys Asp Pro Leu His
 245 250 255
 Pro Phe Asn Tyr Glu Thr Val Asn Glu Asp Glu Phe Thr Arg Ile Asn
 260 265 270
 Ser Phe Pro Ser Ile Leu Phe Asp His Tyr Arg Phe Asn Tyr Glu Tyr
 275 280 285

Asp Asn Met Arg Ile Arg Gly Gln Asp Ile His Glu Leu Glu Glu Val
290 295 300

Ile Gln Glu Leu Arg Asn Lys Asp Arg Ile Phe Ala Gly Phe Val Leu
305 310 315 320

Ser Gly Leu Arg Ile Ser Ala Thr Val Lys Val Phe Ile His Ser Lys
325 330 335

Asn Asp Thr Ser His Glu Glu Tyr Ala Gly Glu Phe Ala Val Leu Gly
340 345 350

Gly Glu Lys Glu Met Pro Trp Ala Tyr Glu Arg Met Leu Lys Leu Asp
355 360 365

Ile Ser Asp Ala Val His Lys Leu His Val Lys Asp Glu Asp Ile Arg
370 375 380

Phe Arg Val Val Val Thr Ala Tyr Asn Gly Asp Val Val Thr Thr Arg
385 390 395 400

Leu Ser Gln Pro Phe Ile Val His Arg Pro Ala His Val Ala His Asp
405 410 415

Ile Leu Val Ile Pro Val Gly Ala Gly His Asp Leu Pro Pro Lys Val
420 425 430

Val Val Lys Ser Gly Thr Lys Val Glu Phe Thr Pro Ile Asp Ser Ser
435 440 445

Val Asn Lys Ala Met Val Glu Leu Gly Ser Tyr Thr Ala Met Ala Lys
450 455 460

Cys Ile Val Pro Pro Phe Ser Tyr His Gly Phe Glu Leu Asp Lys Val
465 470 475 480

Tyr Ser Val Asp His Gly Asp Tyr Tyr Ile Ala Ala Gly Thr His Ala
485 490 495

Leu Cys Glu Gln Asn Leu Arg Leu His Ile His Val Glu His Glu
500 505 510

<210> 33

<211> 334

<212> PRT

<213> Haliotis tuberculata

<400> 33

His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Ile Arg Arg Gly
1 5 10 15

Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Gln Pro Met Ala His
20 25 30

Leu Pro Gly Leu Ala Asp Asn Ala Thr Tyr Arg Asp Pro Ile Ser Gly
35 40 45

Asp Ser Arg His Asn Pro Phe His Asp Val Glu Val Ala Phe Glu Asn
50 55 60

Gly Arg Thr Glu Arg His Pro Asp Ser Arg Leu Phe Glu Gln Pro Leu
 65 70 75 80
 Phe Gly Lys His Thr Arg Leu Phe Asp Ser Ile Val Tyr Ala Phe Glu
 85 90 95
 Gln Glu Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Met Thr His Asn
 100 105 110
 Asn Ile His Ala Trp Ile Gly Gly Gly Glu Lys Tyr Ser Met Ser Ser
 115 120 125
 Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu Arg His Ser Asn
 130 135 140
 Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Asn
 145 150 155 160
 Arg Pro Tyr Lys Ala His Cys Ala Trp Ser Glu Glu Arg Gln Pro Leu
 165 170 175
 Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr
 180 185 190
 Glu Asn Ser Val Pro Thr Asn Val Tyr Asp Tyr Glu Gly Val Leu Gly
 195 200 205
 Tyr Thr Tyr Asp Asp Leu Asn Phe Gly Gly Met Asp Leu Gly Gln Leu
 210 215 220
 Glu Glu Tyr Ile Gln Arg Gln Arg Gln Arg Asp Arg Thr Phe Ala Gly
 225 230 235 240
 Phe Phe Leu Ser His Ile Gly Thr Ser Ala Asn Val Glu Ile Ile Ile
 245 250 255
 Asp His Gly Thr Leu His Thr Ser Val Gly Thr Phe Ala Val Leu Gly
 260 265 270
 Gly Glu Lys Glu Met Lys Trp Gly Phe Asp Arg Leu Tyr Lys Tyr Glu
 275 280 285
 Ile Thr Asp Glu Leu Arg Gln Leu Asn Leu Arg Ala Asp Asp Val Phe
 290 295 300
 Ser Ile Ser Val Lys Val Thr Asp Val Asp Gly Ser Glu Leu Ser Ser
 305 310 315 320
 Glu Leu Ile Pro Ser Ala Ala Ile Ile Phe Glu Arg Ser His
 325 330

<210> 34

<211> 417

<212> PRT

<213> *Haliotis tuberculata*

<400> 34

Ile Asp His Gln Asp Pro His His Asp Thr Ile Ile Arg Lys Asn Val
 1 5 10 15

Asp Asn Leu Thr Pro Glu Glu Ile Asn Ser Leu Arg Arg Ala Met Ala
 20 25 30
 Asp Leu Gln Ser Asp Lys Thr Ala Gly Gly Phe Gln Gln Ile Ala Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Asp Ala Glu Lys Lys
 50 55 60
 Phe Ser Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Cys Leu
 85 90 95
 Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser His Leu Pro
 100 105 110
 Asp Leu Val Leu Val Ser Ser Arg Thr Thr Pro Met Pro Tyr Ser Thr
 115 120 125
 Val Glu Ala Arg Asn Pro Trp Tyr Ser Gly His Ile Asp Thr Val Gly
 130 135 140
 Val Asp Thr Thr Arg Ser Val Arg Gln Glu Leu Tyr Glu Ala Pro Gly
 145 150 155 160
 Phe Gly His Tyr Thr Gly Val Ala Lys Gln Val Leu Leu Ala Leu Glu
 165 170 175
 Gln Asp Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn
 180 185 190
 Phe Ile His Ala Leu Val Gly Gly Ser Glu Pro Tyr Gly Met Ala Ser
 195 200 205
 Leu Arg Tyr Thr Thr Tyr Asp Pro Ile Phe Tyr Leu His His Ser Asn
 210 215 220
 Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly
 225 230 235 240
 Lys Pro Tyr Asn Ser Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro
 245 250 255
 Leu Gln Pro Phe Gly Leu Thr Asp Glu Ile Asn Pro Asp Asp Glu Thr
 260 265 270
 Arg Gln His Ala Val Pro Phe Ser Val Phe Asp Tyr Lys Asn Asn Phe
 275 280 285
 Asn Tyr Glu Tyr Asp Thr Leu Asp Phe Asn Gly Leu Ser Ile Ser Gln
 290 295 300
 Leu Asp Arg Glu Leu Ser Arg Arg Lys Ser His Asp Arg Val Phe Ala
 305 310 315 320
 Gly Phe Leu Leu His Gly Ile Gln Gln Ser Ala Leu Val Lys Phe Phe
 325 330 335
 Val Cys Lys Ser Asp Asp Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr

340 345 350
 Ile Leu Gly Asp Glu Ala Glu Met Pro Trp Gly Tyr Asp Arg Leu Tyr
 355 360 365
 Lys Tyr Glu Ile Thr Glu Gln Leu Asn Ala Leu Asp Leu His Ile Gly
 370 375 380
 Asp Arg Phe Phe Ile Arg Tyr Glu Ala Phe Asp Leu His Gly Thr Ser
 385 390 395 400
 Leu Gly Ser Asn Ile Phe Pro Lys Pro Ser Val Ile His Asp Glu Gly
 405 410 415
 Ala

<210> 35
 <211> 415
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 35
 Gly His His Gln Ala Asp Glu Tyr Asp Glu Val Val Thr Ala Ala Ser
 1 5 10 15
 His Ile Arg Lys Asn Leu Lys Asp Leu Ser Lys Gly Glu Val Glu Ser
 20 25 30
 Leu Arg Ser Ala Phe Leu Gln Leu Gln Asn Asp Gly Val Tyr Glu Asn
 35 40 45
 Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Asp Asp Asn Gly Arg
 50 55 60
 Lys Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
 65 70 75 80
 Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
 85 90 95
 Ala Val Ser Val Pro Tyr Trp Asp Trp Thr Glu Thr Phe Thr Glu Leu
 100 105 110
 Pro Ser Leu Ile Ala Glu Ala Thr Tyr Phe Asn Ser Arg Gln Gln Thr
 115 120 125
 Phe Asp Pro Asn Pro Phe Phe Arg Gly Lys Ile Ser Phe Glu Asn Ala
 130 135 140
 Val Thr Thr Arg Asp Pro Gln Pro Glu Leu Tyr Val Asn Arg Tyr Tyr
 145 150 155 160
 Tyr Gln Asn Val Met Leu Val Phe Glu Gln Asp Asn Tyr Cys Asp Phe
 165 170 175
 Glu Ile Gln Phe Glu Met Val His Asn Val Leu His Ala Trp Leu Gly
 180 185 190
 Gly Arg Ala Thr Tyr Ser Ile Ser Ser Leu Asp Tyr Ser Ala Phe Asp

195	200	205
Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile 210 215 220		
Trp Gln Glu Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp 225 230 235 240		
Cys Ala Ile Asn Leu Met Arg Lys Pro Leu His Pro Phe Asp Asn Ser 245 250 255		
Asp Leu Asn His Asp Pro Val Thr Phe Lys Tyr Ser Lys Pro Thr Asp 260 265 270		
Gly Phe Asp Tyr Gln Asn Asn Phe Gly Tyr Lys Tyr Asp Asn Leu Glu 275 280 285		
Phe Asn His Phe Ser Ile Pro Arg Leu Glu Glu Ile Ile Arg Ile Arg 290 295 300		
Gln Arg Gln Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly 305 310 315 320		
Thr Ser Ala Thr Val Glu Ile Phe Val Cys Val Pro Thr Thr Ser Gly 325 330 335		
Glu Gln Asn Cys Glu Asn Lys Ala Gly Thr Phe Ala Val Leu Gly Gly 340 345 350		
Glu Thr Glu Met Ala Phe His Phe Asp Arg Leu Tyr Arg Phe Asp Ile 355 360 365		
Ser Glu Thr Leu Arg Asp Leu Gly Ile Gln Leu Asp Ser His Asp Phe 370 375 380		
Asp Leu Ser Ile Lys Ile Gln Gly Val Asn Gly Ser Tyr Leu Asp Pro 385 390 395 400		
His Ile Leu Pro Glu Pro Ser Leu Ile Phe Val Pro Gly Ser Ser 405 410 415		

<210> 36

<211> 418

<212> PRT

<213> Haliotis tuberculata

<400> 36

Ser Phe Leu Arg Pro Asp Gly His Ser Asp Asp Ile Leu Val Arg Lys
1 5 10 15

Glu Val Asn Ser Leu Thr Thr Arg Glu Thr Ala Ser Leu Ile His Ala
20 25 30

Leu Lys Ser Met Gln Glu Asp His Ser Pro Asp Gly Phe Gln Ala Ile
35 40 45

Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala Ala
50 55 60

His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln Trp

65		70		75		80
His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ala Leu Arg Arg His Gly						
	85			90		95
Ala Thr Val Gly Val Pro Tyr Trp Asp Trp Leu Arg Pro Gln Ser His						
	100			105		110
Leu Pro Glu Leu Val Thr Met Glu Thr Tyr His Asp Ile Trp Ser Asn						
	115			120		125
Arg Asp Phe Pro Asn Pro Phe Tyr Gln Ala Asn Ile Glu Phe Glu Gly						
	130			135		140
Glu Asn Ile Thr Thr Glu Arg Glu Val Ile Ala Asp Lys Leu Phe Val						
	145			150		155
Lys Gly Gly His Val Phe Asp Lys Leu Val Leu Gln Thr Ser His Pro						
	165			170		175
Ser Ala Glu Gln Glu Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile						
	180			185		190
Leu His Asn Gly Val His Thr Trp Val Gly Gly Ser Arg Thr Tyr Ser						
	195			200		205
Ile Gly His Leu His Tyr Ala Phe Tyr Asp Pro Leu Phe Tyr Leu His						
	210			215		220
His Phe Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu Gln Glu						
	225			230		235
Gln Arg Gly Leu Ser Gly Asp Glu Ala His Cys Ala Leu Glu Gln Met						
	245			250		255
Arg Glu Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn Trp Asn						
	260			265		270
Gln Leu Thr Gln Asp Phe Ser Arg Pro Glu Asp Thr Phe Asp Tyr Arg						
	275			280		285
Lys Phe Gly Tyr Glu Tyr Asp Asn Leu Glu Phe Leu Gly Met Ser Val						
	290			295		300
Ala Glu Leu Asp Gln Tyr Ile Ile Glu His Gln Glu Asn Asp Arg Val						
	305			310		315
Phe Ala Gly Phe Leu Leu Ser Gly Phe Gly Gly Ser Ala Ser Val Asn						
	325			330		335
Phe Gln Val Cys Arg Ala Asp Ser Thr Cys Gln Asp Ala Gly Tyr Phe						
	340			345		350
Thr Val Leu Gly Gly Ser Ala Glu Met Ala Trp Ala Phe Asp Arg Leu						
	355			360		365
Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Glu Lys Met His Leu Arg Tyr						
	370			375		380
Asp Asp Asp Phe Thr Ile Ser Val Ser Leu Thr Ala Asn Asn Gly Thr						
	385			390		395
						400

Val Leu Ser Ser Ser Leu Ile Pro Thr Pro Ser Val Ile Phe Gln Arg
405 410 415

Gly His

<210> 37

<211> 416

<212> PRT

<213> *Haliotis tuberculata*

<400> 37

Arg Asp Ile Asn Thr Arg Ser Met Ser Pro Asn Arg Val Arg Arg Glu
1 5 10 15

Leu Ser Asp Leu Ser Ala Arg Asp Leu Ser Ser Leu Lys Ser Ala Leu
20 25 30

Arg Asp Leu Gln Glu Asp Asp Gly Pro Asn Gly Tyr Gln Ala Leu Ala
35 40 45

Ala Phe His Gly Leu Pro Ala Gly Cys His Asp Ser Arg Gly Asn Glu
50 55 60

Ile Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro Gln Trp His Arg
65 70 75 80

Leu Tyr Thr Leu Gln Leu Glu Met Ala Leu Arg Arg His Gly Ser Ser
85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Glu Leu Pro
100 105 110

Ser Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp His Asp Ala Val
115 120 125

Val Asn Asn Pro Phe Ser Lys Gly Phe Val Lys Phe Ala Asn Thr Tyr
130 135 140

Thr Val Arg Asp Pro Gln Glu Met Leu Phe Gln Leu Cys Glu His Gly
145 150 155 160

Glu Ser Ile Leu Tyr Glu Gln Thr Leu Leu Ala Leu Glu Gln Thr Asp
165 170 175

Tyr Cys Asp Phe Glu Val Gln Phe Glu Val Leu His Asn Val Ile His
180 185 190

Tyr Leu Val Gly Gly Arg Gln Thr Tyr Ala Leu Ser Ser Leu His Tyr
195 200 205

Ala Ser Tyr Asp Pro Phe Phe Phe Ile His His Ser Phe Val Asp Lys
210 215 220

Met Trp Val Val Trp Gln Ala Leu Gln Lys Arg Arg Lys Leu Pro Tyr
225 230 235 240

Lys Arg Ala Asp Cys Ala Val Asn Leu Met Thr Lys Pro Met Arg Pro
245 250 255

Phe Asp Ser Asp Met Asn Gln Asn Pro Phe Thr Lys Met His Ala Val
 260 265 270
 Pro Asn Thr Leu Tyr Asp Tyr Glu Thr Leu Tyr Tyr Ser Tyr Asp Asn
 275 280 285
 Leu Glu Ile Gly Gly Arg Asn Leu Asp Gln Leu Gln Ala Glu Ile Asp
 290 295 300
 Arg Ser Arg Ser His Asp Arg Val Phe Ala Gly Phe Leu Leu Arg Gly
 305 310 315 320
 Ile Gly Thr Ser Ala Asp Val Arg Phe Trp Ile Cys Arg Asn Glu Asn
 325 330 335
 Asp Cys His Arg Gly Gly Ile Ile Phe Ile Leu Gly Gly Ala Lys Glu
 340 345 350
 Met Pro Trp Ser Phe Asp Arg Asn Phe Lys Phe Asp Ile Thr His Val
 355 360 365
 Leu Glu Asn Ala Gly Ile Ser Pro Glu Asp Val Phe Asp Ala Glu Glu
 370 375 380
 Pro Phe Tyr Ile Lys Val Glu Ile His Ala Val Asn Lys Thr Met Ile
 385 390 395 400
 Pro Ser Ser Val Ile Pro Ala Pro Thr Ile Ile Tyr Ser Pro Gly Glu
 405 410 415

<210> 38
 <211> 402
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 38
 Gly Arg Ala Ala Asp Ser Ala His Ser Ala Asn Ile Ala Gly Ser Gly
 1 5 10 15
 Val Arg Lys Asp Val Thr Thr Leu Thr Val Ser Glu Thr Glu Asn Leu
 20 25 30
 Arg Gln Ala Leu Gln Gly Val Ile Asp Asp Thr Gly Pro Asn Gly Tyr
 35 40 45
 Gln Ala Ile Ala Ser Phe His Gly Ser Pro Pro Met Cys Glu Met Asn
 50 55 60
 Gly Arg Lys Val Ala Cys Cys Ala His Gly Met Ala Ser Phe Pro His
 65 70 75 80
 Trp His Arg Leu Tyr Val Lys Gln Met Glu Asp Ala Leu Ala Asp His
 85 90 95
 Gly Ser His Ile Gly Ile Pro Tyr Trp Asp Trp Thr Thr Ala Phe Thr
 100 105 110

Glu Leu Pro Ala Leu Val Thr Asp Ser Glu Asn Asn Pro Phe His Glu
 115 120 125
 Gly Arg Ile Asp His Leu Gly Val Thr Thr Ser Arg Ser Pro Arg Asp
 130 135 140
 Met Leu Phe Asn Asp Pro Glu Gln Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Tyr Cys Gln Phe Glu Val
 165 170 175
 Gln Phe Glu Leu Thr His Asn Ala Ile His Ser Trp Thr Gly Gly Arg
 180 185 190
 Ser Pro Tyr Gly Met Ser Thr Leu Glu Phe Thr Ala Tyr Asp Pro Leu
 195 200 205
 Phe Trp Leu His His Ser Asn Thr Asp Arg Ile Trp Ala Val Trp Gln
 210 215 220
 Ala Leu Gln Lys Tyr Arg Gly Leu Pro Tyr Asn Glu Ala His Cys Glu
 225 230 235 240
 Ile Gln Val Leu Lys Gln Pro Leu Arg Pro Phe Asn Asp Asp Ile Asn
 245 250 255
 His Asn Pro Ile Thr Lys Thr Asn Ala Arg Pro Ile Asp Ser Phe Asp
 260 265 270
 Tyr Glu Arg Phe Asn Tyr Gln Tyr Asp Thr Leu Ser Phe His Gly Lys
 275 280 285
 Ser Ile Pro Glu Leu Asn Asp Leu Leu Glu Glu Arg Lys Arg Glu Glu
 290 295 300
 Arg Thr Phe Ala Ala Phe Leu Leu Arg Gly Ile Gly Cys Ser Ala Asp
 305 310 315 320
 Val Val Phe Asp Ile Cys Arg Pro Asn Gly Asp Cys Val Phe Ala Gly
 325 330 335
 Thr Phe Ala Val Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
 340 345 350
 Arg Leu Phe Arg Tyr Asp Ile Thr Arg Val Met Asn Gln Leu His Leu
 355 360 365
 Gln Tyr Asp Ser Asp Phe Ser Phe Arg Val Lys Leu Val Ala Thr Asn
 370 375 380
 Gly Thr Glu Leu Ser Ser Asp Leu Leu Lys Ser Pro Thr Ile Glu His
 385 390 395 400
 Glu Leu

<210> 39
 <211> 515

<212> PRT
 <213> Haliotis tuberculata

 <220>
 <221> misc_feature
 <222> (425)..(425)
 <223> "Xaa" is any naturally-occurring amino acid residue, including Tyr

 <400> 39
 Gly Ala His Arg Gly Pro Val Glu Glu Thr Glu Val Thr Arg Gln His
 1 5 10 15
 Thr Asp Gly Asn Ala His Phe His Arg Lys Glu Val Asp Ser Leu Ser
 20 25 30
 Leu Asp Glu Ala Asn Asn Leu Lys Asn Ala Leu Tyr Lys Leu Gln Asn
 35 40 45
 Asp His Ser Leu Thr Gly Tyr Glu Ala Ile Ser Gly Tyr His Gly Tyr
 50 55 60
 Pro Asn Leu Cys Pro Glu Glu Gly Asp Asp Lys Ile Pro Leu Leu Arg
 65 70 75 80
 Pro Arg Met Gly Ile Phe Pro Tyr Trp His Arg Leu Leu Thr Ile Gln
 85 90 95
 Leu Glu Arg Ala Leu Glu His Asn Gly Ala Leu Leu Gly Val Pro Tyr
 100 105 110
 Trp Asp Trp Asn Lys Asp Leu Ser Ser Leu Pro Ala Phe Phe Ser Asp
 115 120 125
 Ser Ser Asn Asn Asn Pro Tyr Phe Lys Tyr His Ile Ala Gly Val Gly
 130 135 140
 His Asp Thr Val Arg Glu Pro Thr Ser Leu Ile Tyr Asn Gln Pro Gln
 145 150 155 160
 Ile His Gly Tyr Asp Tyr Leu Tyr Tyr Leu Ala Leu Thr Thr Leu Glu
 165 170 175
 Glu Asn Asn Tyr Trp Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn
 180 185 190
 Ala Val His Ser Trp Leu Gly Gly Ser Gln Lys Tyr Ser Met Ser Thr
 195 200 205
 Leu Glu Tyr Ser Ala Phe Asp Pro Val Phe Met Ile Leu His Ser Gly
 210 215 220
 Leu Asp Arg Leu Trp Ile Ile Trp Gln Glu Leu Gln Lys Ile Arg Arg
 225 230 235 240
 Lys Pro Tyr Asn Phe Ala Lys Cys Ala Tyr His Met Met Glu Glu Pro
 245 250 255
 Leu Ala Pro Phe Ser Tyr Pro Ser Ile Asn Gln Asp Glu Phe Thr Arg
 260 265 270
 Ala Asn Ser Lys Pro Ser Thr Val Phe Asp Ser His Lys Phe Gly Tyr

275 280 285
 His Tyr Asp Asn Leu Asn Val Arg Gly His Ser Ile Gln Glu Leu Asn
 290 295 300
 Thr Ile Ile Asn Asp Leu Arg Asn Thr Asp Arg Ile Tyr Ala Gly Phe
 305 310 315 320
 Val Leu Ser Gly Ile Gly Thr Ser Ala Ser Val Lys Ile Tyr Leu Arg
 325 330 335
 Thr Asp Asp Asn Asp Glu Glu Val Gly Thr Phe Thr Val Leu Gly Gly
 340 345 350
 Glu Arg Glu Met Pro Trp Ala Tyr Glu Arg Val Phe Lys Tyr Asp Ile
 355 360 365
 Thr Glu Val Ala Asp Arg Leu Lys Ile Lys Leu Trp Gly His Pro Leu
 370 375 380
 Thr Ser Gly Thr Gly Asp His Ile Leu Thr Asn Gly Ile Gly Gly Lys
 385 390 395 400
 Gln Glu Pro Thr Gln Ile Leu Ser Ser Ser Thr Asp Leu Pro Ile Met
 405 410 415
 Thr Thr Met Phe Leu Leu Ser Gln Xaa Gly Arg Asn Leu His Ile Pro
 420 425 430
 Pro Lys Val Val Val Lys Lys Gly Thr Arg Ile Glu Phe His Pro Val
 435 440 445
 Asp Asp Ser Val Thr Arg Pro Val Val Asp Leu Gly Ser Tyr Thr Ala
 450 455 460
 Leu Phe Asn Cys Val Val Pro Pro Phe Thr Tyr His Gly Phe Glu Leu
 465 470 475 480
 Asn His Val Tyr Ser Val Lys Pro Gly Asp Tyr Tyr Val Thr Gly Pro
 485 490 495
 Thr Arg Asp Leu Cys Gln Asn Ala Asp Val Arg Ile His Ile His Val
 500 505 510
 Glu Asp Glu
 515

 <210> 40
 <211> 322
 <212> PRT
 <213> Megathura crenulata

 <400> 40
 Gly Leu Pro Tyr Trp Asp Trp Thr Glu Pro Met Thr His Ile Pro Gly
 1 5 10 15
 Leu Ala Gly Asn Lys Thr Tyr Val Asp Ser His Gly Ala Ser His Thr
 20 25 30
 Asn Pro Phe His Ser Ser Val Ile Ala Phe Glu Glu Asn Ala Pro His

35					40					45						
Thr	Lys	Arg	Gln	Ile	Asp	Gln	Arg	Leu	Phe	Lys	Pro	Ala	Thr	Phe	Gly	
50					55					60						
His	His	Thr	Asp	Leu	Phe	Asn	Gln	Ile	Leu	Tyr	Ala	Phe	Glu	Gln	Glu	
65					70					75					80	
Asp	Tyr	Cys	Asp	Phe	Glu	Val	Gln	Phe	Glu	Ile	Thr	His	Asn	Thr	Ile	
85					90					95						
His	Ala	Trp	Thr	Gly	Gly	Ser	Glu	His	Phe	Ser	Met	Ser	Ser	Leu	His	
100					105					110						
Tyr	Thr	Ala	Phe	Asp	Pro	Leu	Phe	Tyr	Phe	His	His	Ser	Asn	Val	Asp	
115					120					125						
Arg	Leu	Trp	Ala	Val	Trp	Gln	Ala	Leu	Gln	Met	Arg	Arg	His	Lys	Pro	
130					135					140						
Tyr	Arg	Ala	His	Cys	Ala	Ile	Ser	Leu	Glu	His	Met	His	Leu	Lys	Pro	
145					150					155					160	
Phe	Ala	Phe	Ser	Ser	Pro	Leu	Asn	Asn	Asn	Glu	Lys	Thr	His	Ala	Asn	
165					170					175						
Ala	Met	Pro	Asn	Lys	Ile	Tyr	Asp	Tyr	Glu	Asn	Val	Leu	His	Tyr	Thr	
180					185					190						
Tyr	Glu	Asp	Leu	Thr	Phe	Gly	Gly	Ile	Ser	Leu	Glu	Asn	Ile	Glu	Lys	
195					200					205						
Met	Ile	His	Glu	Asn	Gln	Gln	Glu	Asp	Arg	Ile	Tyr	Ala	Gly	Phe	Leu	
210					215					220						
Leu	Ala	Gly	Ile	Arg	Thr	Ser	Ala	Asn	Val	Asp	Ile	Phe	Ile	Lys	Thr	
225					230					235					240	
Thr	Asp	Ser	Val	Gln	His	Lys	Ala	Gly	Thr	Phe	Ala	Val	Leu	Gly	Gly	
245					250					255						
Ser	Lys	Glu	Met	Lys	Trp	Gly	Phe	Asp	Arg	Val	Phe	Lys	Phe	Asp	Ile	
260					265					270						
Thr	His	Val	Leu	Lys	Asp	Leu	Asp	Leu	Thr	Ala	Asp	Gly	Asp	Phe	Glu	
275					280					285						
Val	Thr	Val	Asp	Ile	Thr	Glu	Val	Asp	Gly	Thr	Lys	Leu	Ala	Ser	Ser	
290					295					300						
Leu	Ile	Pro	His	Ala	Ser	Val	Ile	Arg	Glu	His	Ala	Arg	Gly	Lys	Leu	
305					310					315					320	
Asn Arg																

<210> 41
 <211> 414
 <212> PRT

<213> Megathura crenulata

<400> 41

Val	Lys	Phe	Asp	Lys	Val	Pro	Arg	Ser	Arg	Leu	Ile	Arg	Lys	Asn	Val		
1				5					10					15			
Asp	Arg	Leu	Ser	Pro	Glu	Glu	Met	Asn	Glu	Leu	Arg	Lys	Ala	Leu	Ala		
			20					25					30				
Leu	Leu	Lys	Glu	Asp	Lys	Ser	Ala	Gly	Gly	Phe	Gln	Gln	Leu	Gly	Ala		
		35					40					45					
Phe	His	Gly	Glu	Pro	Lys	Trp	Cys	Pro	Ser	Pro	Glu	Ala	Ser	Lys	Lys		
	50					55					60						
Phe	Ala	Cys	Cys	Val	His	Gly	Met	Ser	Val	Phe	Pro	His	Trp	His	Arg		
65					70					75					80		
Leu	Leu	Thr	Val	Gln	Ser	Glu	Asn	Ala	Leu	Arg	Arg	His	Gly	Tyr	Asp		
				85					90					95			
Gly	Ala	Leu	Pro	Tyr	Trp	Asp	Trp	Thr	Ser	Pro	Leu	Asn	His	Leu	Pro		
			100					105					110				
Glu	Leu	Ala	Asp	His	Glu	Lys	Tyr	Val	Asp	Pro	Glu	Asp	Gly	Val	Glu		
		115					120					125					
Lys	His	Asn	Pro	Trp	Phe	Asp	Gly	His	Ile	Asp	Thr	Val	Asp	Lys	Thr		
	130					135					140						
Thr	Thr	Arg	Ser	Val	Gln	Asn	Lys	Leu	Phe	Glu	Gln	Pro	Glu	Phe	Gly		
145					150					155					160		
His	Tyr	Thr	Ser	Ile	Ala	Lys	Gln	Val	Leu	Leu	Ala	Leu	Glu	Gln	Asp		
				165					170					175			
Asn	Phe	Cys	Asp	Phe	Glu	Ile	Gln	Tyr	Glu	Ile	Ala	His	Asn	Tyr	Ile		
			180					185					190				
His	Ala	Leu	Val	Gly	Gly	Ala	Gln	Pro	Tyr	Gly	Met	Ala	Ser	Leu	Arg		
		195					200					205					
Tyr	Thr	Ala	Phe	Asp	Pro	Leu	Phe	Tyr	Leu	His	His	Ser	Asn	Thr	Asp		
	210					215						220					
Arg	Ile	Trp	Ala	Ile	Trp	Gln	Ala	Leu	Gln	Lys	Tyr	Arg	Gly	Lys	Pro		
225					230					235					240		
Tyr	Asn	Val	Ala	Asn	Cys	Ala	Val	Thr	Ser	Met	Arg	Glu	Pro	Leu	Gln		
				245					250					255			
Pro	Phe	Gly	Leu	Ser	Ala	Asn	Ile	Asn	Thr	Asp	His	Val	Thr	Lys	Glu		
			260					265					270				
His	Ser	Val	Pro	Phe	Asn	Val	Phe	Asp	Tyr	Lys	Thr	Asn	Phe	Asn	Tyr		
		275					280					285					
Glu	Tyr	Asp	Thr	Leu	Glu	Phe	Asn	Gly	Leu	Ser	Ile	Ser	Gln	Leu	Asn		
	290					295					300						

Lys Lys Leu Glu Ala Ile Lys Ser Gln Asp Arg Phe Phe Ala Gly Phe
305 310 315 320

Leu Leu Ser Gly Phe Lys Lys Ser Ser Leu Val Lys Phe Asn Ile Cys
325 330 335

Thr Asp Ser Ser Asn Cys His Pro Ala Gly Glu Phe Tyr Leu Leu Gly
340 345 350

Asp Glu Asn Glu Met Pro Trp Ala Tyr Asp Arg Val Phe Lys Tyr Asp
355 360 365

Ile Thr Glu Lys Leu His Asp Leu Lys Leu His Ala Glu Asp His Phe
370 375 380

Tyr Ile Asp Tyr Glu Val Phe Asp Leu Lys Pro Ala Ser Leu Gly Lys
385 390 395 400

Asp Leu Phe Lys Gln Pro Ser Val Ile His Glu Pro Arg Ile
405 410

<210> 42

<211> 411

<212> PRT

<213> Megathura crenulata

<400> 42

Gly His His Glu Gly Glu Val Tyr Gln Ala Glu Val Thr Ser Ala Asn
1 5 10 15

Arg Ile Arg Lys Asn Ile Glu Asn Leu Ser Leu Gly Glu Leu Glu Ser
20 25 30

Leu Arg Ala Ala Phe Leu Glu Ile Glu Asn Asp Gly Thr Tyr Glu Ser
35 40 45

Ile Ala Lys Phe His Gly Ser Pro Gly Leu Cys Gln Leu Asn Gly Asn
50 55 60

Pro Ile Ser Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
65 70 75 80

Arg Leu Tyr Val Val Val Val Glu Asn Ala Leu Leu Lys Lys Gly Ser
85 90 95

Ser Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Arg Ile Glu His Leu
100 105 110

Pro His Leu Ile Ser Asp Ala Thr Tyr Tyr Asn Ser Arg Gln His His
115 120 125

Tyr Glu Thr Asn Pro Phe His His Gly Lys Ile Thr His Glu Asn Glu
130 135 140

Ile Thr Thr Arg Asp Pro Lys Asp Ser Leu Phe His Ser Asp Tyr Phe
145 150 155 160

Tyr Glu Gln Val Leu Tyr Ala Leu Glu Gln Asp Asn Phe Cys Asp Phe
165 170 175

Glu Ile Gln Leu Glu Ile Leu His Asn Ala Leu His Ser Leu Leu Gly
 180 185 190
 Gly Lys Gly Lys Tyr Ser Met Ser Asn Leu Asp Tyr Ala Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Thr Thr Asp Arg Ile Trp Ala Ile
 210 215 220
 Trp Gln Asp Leu Gln Arg Phe Arg Lys Arg Pro Tyr Arg Glu Ala Asn
 225 230 235 240
 Cys Ala Ile Gln Leu Met His Thr Pro Leu Gln Pro Phe Asp Lys Ser
 245 250 255
 Asp Asn Asn Asp Glu Ala Thr Lys Thr His Ala Thr Pro His Asp Gly
 260 265 270
 Phe Glu Tyr Gln Asn Ser Phe Gly Tyr Ala Tyr Asp Asn Leu Glu Leu
 275 280 285
 Asn His Tyr Ser Ile Pro Gln Leu Asp His Met Leu Gln Glu Arg Lys
 290 295 300
 Arg His Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly Thr
 305 310 315 320
 Ser Ala Asp Gly His Val Phe Val Cys Leu Pro Thr Gly Glu His Thr
 325 330 335
 Lys Asp Cys Ser His Glu Ala Gly Met Phe Ser Ile Leu Gly Gly Gln
 340 345 350
 Thr Glu Met Ser Phe Val Phe Asp Arg Leu Tyr Lys Leu Asp Ile Thr
 355 360 365
 Lys Ala Leu Lys Lys Asn Gly Val His Leu Gln Gly Asp Phe Asp Leu
 370 375 380
 Glu Ile Glu Ile Thr Ala Val Asn Gly Ser His Leu Asp Ser His Val
 385 390 395 400
 Ile His Ser Pro Thr Ile Leu Phe Glu Ala Gly
 405 410

<210> 43

<211> 111

<212> PRT

<213> Megathura crenulata

<400> 43

Asp Ser Ala His Thr Asp Asp Gly His Thr Glu Pro Val Met Ile Arg
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Lys Asp Ile Thr Gln Leu Asp Lys Arg Gln Gln Leu Ser Leu Val Lys
 20 25 30

Ala Leu Glu Ser Met Lys Ala Asp His Ser Ser Asp Gly Phe Gln Ala
 35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ala Ala
50 55 60

Ser Lys Arg Phe Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln
65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ser Leu Arg Lys His
85 90 95

Gly Ala Val Val Gly Leu Pro Tyr Trp Asp Trp Thr Leu Pro Arg
100 105 110

<210> 44

<211> 317

<212> PRT

<213> Megathura crenulata

<400> 44

Gly Leu Pro Tyr Trp Asp Trp Thr Met Pro Met Ser His Leu Pro Glu
1 5 10 15

Leu Ala Thr Ser Glu Thr Tyr Leu Asp Pro Val Thr Gly Glu Thr Lys
20 25 30

Asn Asn Pro Phe His His Ala Gln Val Ala Phe Glu Asn Gly Val Thr
35 40 45

Ser Arg Asn Pro Asp Ala Lys Leu Phe Met Lys Pro Thr Tyr Gly Asp
50 55 60

His Thr Tyr Leu Phe Asp Ser Met Ile Tyr Ala Phe Glu Gln Glu Asp
65 70 75 80

Phe Cys Asp Phe Glu Val Gln Tyr Glu Leu Thr His Asn Ala Ile His
85 90 95

Ala Trp Val Gly Gly Ser Glu Lys Tyr Ser Met Ser Ser Leu His Tyr
100 105 110

Thr Ala Phe Asp Pro Ile Phe Tyr Leu His His Ser Asn Val Asp Arg
115 120 125

Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Gly Lys Ser Tyr
130 135 140

Lys Ala His Cys Ala Ser Ser Gln Glu Arg Glu Pro Leu Lys Pro Phe
145 150 155 160

Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr His Asn Ser
165 170 175

Val Pro Thr Asn Val Tyr Asp Tyr Val Gly Val Leu His Tyr Arg Tyr
180 185 190

Asp Asp Leu Gln Phe Gly Gly Met Thr Met Ser Glu Leu Glu Glu Tyr
195 200 205

Ile His Lys Gln Thr Gln His Asp Arg Thr Phe Ala Gly Phe Phe Leu
210 215 220

Ser Tyr Ile Gly Thr Ser Ala Ser Val Asp Ile Phe Ile Asn Arg Glu
 225 230 235 240
 Gly His Asp Lys Tyr Lys Val Gly Ser Phe Val Val Leu Gly Gly Ser
 245 250 255
 Lys Glu Met Lys Trp Gly Phe Asp Arg Met Tyr Lys Tyr Glu Ile Thr
 260 265 270
 Glu Ala Leu Lys Thr Leu Asn Val Ala Val Asp Asp Gly Phe Ser Ile
 275 280 285
 Thr Val Glu Ile Thr Asp Val Asp Gly Ser Pro Pro Ser Ala Asp Leu
 290 295 300
 Ile Pro Pro Pro Ala Ile Ile Phe Glu Arg Gly His Ala
 305 310 315

<210> 45
 <211> 411
 <212> PRT
 <213> Megathura crenulata

<400> 45
 Asp Ala Lys Asp Phe Gly His Ser Arg Lys Ile Arg Lys Ala Val Asp
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 Ser Leu Thr Val Glu Glu Gln Thr Ser Leu Arg Arg Ala Met Ala Asp
 20 25 30
 Leu Gln Asp Asp Lys Thr Ser Gly Gly Phe Gln Gln Ile Ala Ala Phe
 35 40 45
 His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Glu Lys Lys Phe
 50 55 60
 Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg Leu
 65 70 75 80
 Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Phe Thr Gly
 85 90 95
 Gly Leu Pro Tyr Trp Asp Trp Thr Arg Ser Met Ser Ala Leu Pro His
 100 105 110
 Phe Val Ala Asp Pro Thr Tyr Asn Asp Ala Ile Ser Ser Gln Glu Glu
 115 120 125
 Asp Asn Pro Trp His His Gly His Ile Asp Ser Val Gly His Asp Thr
 130 135 140
 Thr Arg Asp Val Arg Asp Asp Leu Tyr Gln Ser Pro Gly Phe Gly His
 145 150 155 160
 Tyr Thr Asp Ile Ala Gln Gln Val Leu Leu Ala Phe Glu Gln Asp Ser
 165 170 175
 Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn Phe Ile His
 180 185 190

Ala Leu Ile Gly Gly Asn Glu Pro Tyr Ser Met Ser Ser Leu Arg Tyr
195 200 205

Thr Thr Tyr Asp Pro Ile Phe Phe Leu His His Ser Ser Thr Asp Arg
210 215 220

Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro Tyr
225 230 235 240

Asn Thr Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro Leu Gln Pro
245 250 255

Phe Gly Leu Asp Ser Val Ile Asn Pro Asp Asp Glu Thr Arg Glu His
260 265 270

Ser Val Pro Phe Arg Val Phe Asp Tyr Lys Asn Asn Phe Asp Tyr Glu
275 280 285

Tyr Glu Ser Leu Ala Phe Asn Gly Leu Ser Ile Ala Gln Leu Asp Arg
290 295 300

Glu Leu Gln Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe Leu
305 310 315 320

Leu His Glu Ile Gly Gln Ser Ala Lys His Asn Val Ser Asp Cys Asp
325 330 335

His Tyr Ala Gly Glu Phe Tyr Ile Leu Gly Asp Glu Ala Glu Met Pro
340 345 350

Trp Arg Tyr Asp Arg Val Tyr Lys Tyr Glu Ile Thr Gln Gln Leu His
355 360 365

Asp Leu Asp Leu His Val Gly Asp Asn Phe Phe Leu Lys Tyr Glu Ala
370 375 380

Phe Asp Leu Asn Gly Gly Ser Leu Gly Gly Ser Ile Phe Ser Gln Pro
385 390 395 400

Ser Val Ile Phe Glu Pro Ala Ala Gly Met Phe
405 410

<210> 46
<211> 109
<212> PRT
<213> Megathura crenulata

<400> 46
Gly Ser His Gln Ala Asp Glu Tyr Arg Glu Ala Val Thr Ser Ala Ser
1 5 10 15

His Ile Arg Lys Asn Ile Arg Asp Leu Ser Glu Gly Glu Ile Glu Ser
20 25 30

Ile Arg Ser Ala Phe Leu Gln Ile Gln Lys Glu Gly Ile Tyr Glu Asn
35 40 45

Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Glu His Asp Gly His
50 55 60

Pro Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
65 70 75 80

Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
85 90 95

Ala Val Ala Val Pro Tyr Trp Asp Trp Thr Leu Pro Arg
100 105

<210> 47

<211> 329

<212> PRT

<213> Megathura crenulata

<400> 47

Met Ala Val Phe Pro His Trp His Arg Leu Phe Val Lys Gln Met Glu
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Asp Ala Leu Ala Ala His Gly Ala His Ile Gly Ile Pro Tyr Trp Asp
20 25 30

Trp Thr Ser Ala Phe Ser His Leu Pro Ala Leu Val Thr Asp His Glu
35 40 45

Asn Asn Pro Phe His His Gly His Ile Gly His Leu Asn Val Asp Thr
50 55 60

Ser Arg Ser Pro Arg Asp Met Leu Phe Asn Asp Pro Glu Gln Gly Ser
65 70 75 80

Glu Ser Phe Phe Tyr Arg Gln Val Leu Leu Thr Leu Glu Gln Thr Asp
85 90 95

Phe Cys Gln Phe Glu Val Gln Phe Glu Leu Thr His Asn Ala Ile His
100 105 110

Ser Trp Thr Gly Gly His Thr Pro Tyr Gly Met Ser Ser Leu Glu Tyr
115 120 125

Thr Ala Tyr Asp Pro Leu Phe Tyr Leu His His Ser Asn Thr Asp Arg
130 135 140

Ile Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Leu Pro Tyr
145 150 155 160

Asn Ala Ala His Cys Asp Ile Gln Val Leu Lys Gln Pro Leu Lys Pro
165 170 175

Phe Ser Glu Ser Arg Asn Pro Asn Pro Val Thr Arg Ala Asn Ser Arg
180 185 190

Ala Val Asp Ser Phe Asp Tyr Glu Lys Phe Asn Tyr Gln Tyr Asp Thr
195 200 205

Leu Thr Phe His Gly Leu Ser Ile Pro Glu Leu Asp Ala Met Leu Gln
210 215 220

Glu Arg Lys Lys Glu Glu Arg Thr Phe Ala Ala Phe Leu Leu His Gly
225 230 235 240

Phe	Gly	Ala	Ser	Ala	Asp	Val	Ser	Phe	Asp	Val	Cys	Thr	Pro	Asp	Gly		
				245					250					255			
His	Cys	Ala	Phe	Ala	Gly	Thr	Phe	Ala	Val	Leu	Gly	Gly	Glu	Leu	Glu		
				260					265					270			
Met	Pro	Trp	Ser	Phe	Glu	Arg	Leu	Phe	Arg	Tyr	Asp	Ile	Thr	Lys	Val		
				275					280					285			
Leu	Lys	Gln	Met	Asn	Leu	His	Tyr	Asp	Ser	Glu	Phe	His	Phe	Glu	Leu		
				290					295					300			
Lys	Ile	Val	Gly	Thr	Asp	Gly	Thr	Glu	Leu	Pro	Ser	Asp	Arg	Ile	Lys		
305					310					315					320		
Ser	Pro	Thr	Ile	Glu	His	His	Gly	Gly									
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<210> 48
<211> 103
<212> PRT
<213> Megathura crenulata
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<400> 48
Gly His Asp His Ser Glu Arg His Asp Gly Phe Phe Arg Lys Glu Val
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Gly Ser Leu Ser Leu Asp Glu Ala Asn Asp Leu Lys Asn Ala Leu Tyr
      20           25          30
Lys Leu Gln Asn Asp Gln Gly Pro Asn Gly Tyr Glu Ser Ile Ala Gly
      35           40          45
Tyr His Gly Tyr Pro Phe Leu Cys Pro Glu His Gly Glu Asp Gln Tyr
    50           55          60
Ala Cys Cys Val His Gly Met Pro Val Phe Pro His Trp His Arg Leu
   65           70          75          80
His Thr Ile Gln Phe Glu Arg Ala Leu Lys Glu His Gly Ser His Leu
             85          90          95
Gly Leu Pro Tyr Trp Asp Trp
              100
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<210> 49
<211> 1269
<212> DNA
<213> Haliotis tuberculata
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<400> 49							
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acgtcactgc	atctacaggg	cctctgagtt	tcgaagacat	aacatcttac	catgccgcac	180	
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tgactgaacc	catctacatt	gacagttaa	gtggaagagg	gacaaacca	tactggtacc	420	
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agaaggtgga	gcctgggtcac	tacacacatc	ttatggagac	tgtcctcgac	gctctcgaac	540
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tggttggcgg	taaatttgaa	tattcaatgt	caaacttggg	atacacctcc	tacgacccca	660
tcttcttctc	ccaccactcc	aacgttgacc	gcctcttcgc	catctggcag	cgtcttcagg	720
aactgcgagg	aaagaatccc	aatgcaatgg	actgtgcaca	tgaactcgct	caccagcaac	780
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caagcttccg	actcagtggc	tttgggggtt	ctgccaacgt	tgttgtctat	gcatgtgtcc	1020
ctgatgatga	tccacgcagt	gatgactact	gcgagaaagc	aggcgacttc	ttcattcttg	1080
gggggtcaaa	cgaaatgccg	tggagattct	acgaccctt	cttctatgat	gtaactgaag	1140
cggtagatca	ccttggagtc	ccgctaagtg	gccactacta	tgtgaaaaca	gaactcttca	1200
gcgtgaatgg	cacagcactt	tcacctgatc	ttcttctctc	accaactgtt	gcctaccgac	1260
ctgggaaaag						1269

<210> 50

<211> 569

<212> DNA

<213> *Haliotis tuberculata*

<400> 50

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atcaagtttg	agaataagaa	gactgcaaga	gctgttgacg	atcgcttttt	cgagaagggt	180
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ggccgtcaca	cgtactccat	gtctcatctc	gagttacacc	ctcctacgac	ccccctctct	360
tcctccatca	ctccaacacc	ggaccgcacc	ttcgccatct	gggaacgtct	tcaggtactc	420
agaggaaaag	acccaacac	cgccgactgc	gcacacaacc	tcattccatga	gcccattggaa	480
ccgttccgtc	gggactcgaa	ccctcttgac	ctcaccaggg	aaaactccaa	accaattgac	540
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<210> 51

<211> 1246

<212> DNA

<213> *Haliotis tuberculata*

<400> 51

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gccacctata	gagatcccat	cagcggggac	agcagacaca	accccttcca	cgatgttgaa	420
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<210> 52
 <211> 1242
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 52
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 agaacgacgg agtctatgag aatattgcca agttccacgg caagcctggg ttgtgtgatg 180
 ataacgggtcg caagggttgc tgttgtgtcc atggaatgcc caccttcccc cagtggcaca 240
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 ttgagaatgc tgttacaaca cgtgatcccc agcctgagct gtacgttaac aggtactact 480
 accaaaacgt catgttggtt tttgaacagg acaactactg cgacttcgag atacagtttg 540
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 gccatgactt tgacctcagc atcaagattc aaggagttaa tggatcctac cttgatccac 1200
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<210> 53
 <211> 1257
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 53
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 attcacctga cgggttccaa gccattgcct ctttccatgc tctgccacca ctctgccctt 180
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 agacatacca tgatatttgg agtaacagag atttcccaa tcctttctac caagccaata 420
 ttgagtttga aggagaaaac attacaacag agagagaagt cattgcagac aaactttttg 480
 tcaaagggtg acacgttttt gataaactgg ttcttcaaac aagccatcct agcgtgagc 540
 aggaaaacta ctgtgacttt gagattcagt ttgaaattct tcacaacggc gttcacacgt 600
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<210> 54
 <211> 1257
 <212> DNA
 <213> Megathura crenulata

<400> 54
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 caactattca tgacccggag acaggcagag atataccaaa tccatttatt gggttctaaaa 420
 tagagtttga aggagaaaaac gtacatacta aaagagatat caatagggat cgtctcttcc 480
 agggatcaac aaaaacacat cataactggg ttattgagca agcactgctt gctcttgaac 540
 aaaccaacta ctgcgacttc gaggttcagt ttgaaattat gcataatggg gttcatacct 600
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 aaatgccttg ggcctttgat cggctttaca agtacgacat aacagaaacc ttagacaaga 1140
 tgaaccttcg acatgacgaa atcttccaga ttgaagtaac cattacatcc tacgatggaa 1200
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<210> 55
 <211> 1254
 <212> DNA
 <213> Megathura crenulata

<400> 55
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 acgatgtctg gagaaataaa gtaatgcaa atccatttgc ccgaggggat gtcccctcac 420
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 aacactcagc gcttctgaat caagctcttt tggcgctgga acagcacgac tactgcgatt 540
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 tccatccctc tgaaccattc ttcacaaagg tgtcagtgac agccgtcaac ggaacagttc 1200
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<210> 56
 <211> 509
 <212> DNA
 <213> Megathura crenulata

<400> 56
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 acacacttac cactgcagag gtggacaatc tcaaagatgc catgagagcc gtcattggcag 120
 accacggtcc aaatggatac caggctatag cagcgttcca tggaaacca ccaatgtgcc 180
 ctatgccaga tggaaagaat tactcgtggt gtacacatgg catgggtact ttccccact 240
 ggcacagact gtacacaaaa cagatggaaag atgccttgac cgcccatggg gccagagtcg 300
 gccttcctta ctgggacggg acaactgcct ttacagcttt gccactttt gtcacagatg 360
 aagaggacaa tcctttccat catggtcaca tagactattt gggagtggat acaactcggg 420
 cgccccgaga caagttgttc aatgatccag agcgaggatc agaatcggtc ttctacaggc 480
 aggttctctt ggctttggag cagacagat 509

<210> 57
 <211> 943
 <212> DNA
 <213> Megathura crenulata

<400> 57
 ggctgcctt actgggattg gaccatgcca atgagtcatt tgccagaact ggctacaagt 60
 gagacctacc tcgatccagt tactggggaa actaaaaaca accctttcca tcacgcccac 120
 gtggcggttg aaaatgggtg aacaagcagg aatcctgatg ccaaactttt tatgaaacca 180
 acttacggag accacactta cctcttcgac agcatgatct acgcatttga gcaggaagac 240
 ttctgcgact ttgaagtcca atatgagctc acgcataatg caatacatgc atgggttgga 300
 ggcagtgaat agtattcaat gtcttctctt cactacactg cttttgatcc tatattttac 360
 ctccatcact caaatgttga tcgtctctgg gccatttggc aagctcttca aatcaggaga 420
 ggcaagctctt acaaggccca ctgctcctcg tctcaagaaa gagaaccatt aaagcctttt 480
 gcattcagtt cccactgaa caacaacgag aaaacgtacc acaactctgt cccactaac 540
 gtttatgact atgtgggagt ttgacactat cgatatgatg accttcagtt tggcggtatg 600
 accatgtcag aacttgagga atatattcac aagcagacac aacatgatag aacctttgca 660
 ggattcttcc ttccatatat tggaacatca gcaagcgtag atatcttcat caatcgagaa 720
 ggtcatgata aatacaaatg gggaggtttt gtagtacttg gtggatccaa agaaatgaaa 780
 tggggctttg atagaatgta caagtatgag atcactgagg ctctgaagac gctgaatgtt 840
 gcagtggatg atgggttcag cattactgtt gagatcaccg atgttgatgg atctccccca 900
 tctgcagatc tcattccacc tctgctata atctttgaac gtg 943

<210> 58
 <211> 1248
 <212> DNA
 <213> Megathura crenulata

<400> 58
 ctgatgccaa agactttggc catagcagaa aaatcaggaa agccgttgat tctctgacag 60
 tcgaagaaca aacttcgttg aggcgagcta tggcagatct acaggacgac aaaacatcag 120
 ggggtttcca gcagattgca gcattccacg gagaaccaa atgggtgtcca agccccgaag 180
 cggagaaaaa atttgcatgc tgtgttcag gaatggctgt tttccctcac tggcacagat 240
 tgctgacagt tcaaggagaa aatgctctga ggaaacatgg ctttactggg ggactgccct 300
 actgggactg gactcgatca atgagcgccc ttccacattt tgttgctgat cctacttaca 360
 atgatgctat ttccagccag gaagaagata acccatggca tcatgggtcac atagactctg 420
 ttgggcatga tactacaaga gatgtgcgtg atgatcttta tcaatctcct ggtttcggtc 480
 actacacaga tattgcaaaa caagtccttc tggcctttga gcaggacgat ttctgtgatt 540
 ttgaggatca atttgaaatt gcccataatt tcatacatgc tctgggtggg ggtaacgaac 600
 catacagtat gtcattctttg aggtatacta catacagatc aatcttcttc ttgcaccgct 660
 ccaatacaga ccgacttttg gccatttggc aagctttgca aaaataccgg gggaaacat 720
 acaacactgc aaactgtgcc attgcatcca tgagaaaacc acttcagcca tttgggtctg 780
 atagtgtcat aaatccagat gacgaaactc tggaacatc gggtccttcc cgagtccttcg 840
 actacaagaa caacttcgac tatgagtatg agagcctggc atttaatggg ctgtctattg 900
 cccaactgga ccgagagttg cagagaagaa agtcacatga cagagtcttt gcaggattcc 960

ttcttcatga	aattggacag	tctgcactcg	tgaaattcta	cgtttgcaaa	cacaatgtat	1020
ctgactgtga	ccattatgct	ggagaattct	acattttggg	agatgaagct	gagatgcctt	1080
ggaggtatga	ccgtgtgtac	aagtacgaga	taacacagca	gctgcacgat	ttagatctac	1140
atgttgagga	taattttctt	cttaaatatg	aagcctttga	tctgaatggc	ggaagtcttg	1200
gtggaagtat	cttttctcag	ccttcgggtg	ttttcgagcc	agctgcag		1248

<210> 59

<211> 1257

<212> DNA

<213> Megathura crenulata

<400> 59

gttcacacca	ggctgatgaa	tatcgtgagg	cagtaacaag	cgctagccac	ataagaaaaa	60
atatccggga	cctctcagag	ggagaaattg	agagcatcag	atctgctttc	ctccaaattc	120
aaaaagaggg	tatatatgaa	aacattgcaa	agttccatgg	aaaaccagga	ctttgtgaac	180
atgatggaca	tcctgtttgt	tgttgtgtcc	atggcatgcc	cacctttccc	cactggcaca	240
gactgtacgt	tcttcagggt	gagaatgcgc	tcttagaacg	agggctctga	gttgctgttc	300
cttactggga	ctggaccgag	aaagctgact	ctctgccatc	attaatcaat	gatgcaactt	360
atttcaattc	acgatcccag	acctttgatc	ctaatecctt	cttcaggggg	catattgcct	420
tcgagaatgc	tgtgacgtcc	agagatcctc	agccagaact	atgggacaat	aaggacttct	480
acgagaatgt	catgctggct	cttgagcaag	acaacttctg	tgactttgag	attcagcttg	540
agctgataca	caacgccctt	cattctagac	ttggaggaag	ggctaaatac	tccctttcgt	600
ctcttgatta	taccgcattt	gatcctgtat	ttttccttca	ccatgcaaac	gttgacagaa	660
tctgggccat	ctggcaggac	ttgcagagat	atagaaaaga	accatacaat	gaggctgact	720
gcgcagtcaa	cgagatgcgt	aaacctcttc	aaccatttaa	taaccacaga	cttaacagtg	780
attccatgac	gcttaaacac	aacctcccac	aagacagttt	tgattatcaa	aaccgcttca	840
ggtaccaata	tgataacctt	caatttaacc	acttcagcat	acaaaagcta	gaccaaacta	900
ttcaggctag	aaaacaacac	gacagagttt	ttgctggctt	tattcttcac	aacattggga	960
catctgctgt	tgtagatatt	tatatattgc	ttgaacaagg	aggagaacaa	aactgcaaga	1020
caaaggcggg	ttccttcacg	attctggggg	gagaaacaga	aatgccattc	cactttgacc	1080
gcttgataca	atttgacata	acgtctgctc	tgcataaact	tggtgttccc	ttggacggac	1140
atggattcga	catcaaagtt	gacgtcagag	ctgtcaatgg	atcgcatctt	gatcaacaca	1200
tcctcaacga	accgagtctg	ctttttgttc	ctggtgaacg	taagaatata	tattatg	1257

<210> 60

<211> 1239

<212> DNA

<213> Megathura crenulata

<400> 60

atgggctttc	acaacataat	cttgtgcaaa	aagaagtaag	ctctctttaca	acactggaga	60
aacatttttt	gaggaaagct	ctcaagaaca	tgcaagcaga	tgattctcca	gacggatatc	120
aagctattgc	ttctttccac	gctttgcctc	ctctttgtcc	aagtccatct	gctgcacata	180
gacacgcttg	ttgcctccat	ggtatggcta	ccttccctca	gtggcacaga	ctctacacag	240
ttcagttcga	agattctttg	aaacgacatg	gttctattgt	cggacttcca	tattgggatt	300
ggctgaaacc	gcagctctga	ctccctgatt	tggtgacaca	ggagacatac	gagcacctgt	360
tttcacacaa	aaccttccca	aatccgttcc	tcaaggcaaa	tatagaattt	gagggagagg	420
gagtaacaac	agagagggat	gttgatgctg	aacacctctt	tgcaaaagga	aatctggttt	480
acaacaactg	gttttgcaat	caggcactat	atgcactaga	acaagaaaat	tactgtgact	540
ttgaaataca	gttcgaaatt	ttgcataatg	gaattcattc	atgggttgga	ggatcaaaga	600
cccattcaat	aggtcatctt	cattacgcac	catacgatcc	actgttctat	atccaccatt	660
cgcagacaga	tcgcattttg	gctatctggc	aagctctcca	ggagcacaga	ggtcttttcag	720
ggaaggaagc	acactgcgcc	ctggagcaaa	tgaaagaccc	tctcaaacct	ttcagctttg	780
gaagtcccta	taatttgaac	aaacgcactc	aagagttctc	caagcctgaa	gacacatttg	840
attatcaccg	attcgggtat	gagtatgatt	ccctcgaatt	tggtggcatg	tctgtttcaa	900
gtttacataa	ctatataaaa	caacaacagg	aagctgatag	agtcttcgca	ggattccttc	960
ttaaaggatt	tggaacaatc	gcattccgtat	cgtttgatat	ctgcagacca	gaccagagtt	1020
gccaagaagc	tggaacttct	tcagttctcg	gtggaagttc	agaaatgccg	tggaagtttg	1080
acaggcttta	caagtacgac	attacaaaaa	cgttgaaaga	catgaaactg	cgatacgatg	1140
acacattttac	catcaagggt	cacataaagg	atatagctgg	agctgagttg	gacagcgatc	1200
tgattccaac	tccttctggt	ctccttgaag	aaggaaagc			1239

<210> 61
 <211> 1251
 <212> DNA
 <213> Haliotis tuberculata

<400> 61
 atgggatcaa tgtacgtcac gttggtcgtat atcggattcgt tatggaacta tctgaactca 60
 ccgagagaga tctcgccagc ctgaaatctg caatgagggtc tctacaagct gacgatgggg 120
 tgaacgggtta tcaagccatt gcatcattcc acgggtctccc ggcttcttgt catgatgatg 180
 agggacatga gattgcctgt tgtatccacg gaatgccagt attccacacac tggcacaggc 240
 ttacaccct gcaaattggac atggctctgt tatctcacgg atctgctgtt gctattccat 300
 actgggactg gaccaaact atcagcaaac tgcctgatct cttcaccagc cctgaatatt 360
 acgatccttg gagggatgca gttgtcaata atccatttgc taaaggctac attaaatccg 420
 aggacgctta cacggtttag gatcctcagg acattttgtta ccacttgacg gacgaaacgg 480
 gaacatctgt tttgttagat caaactcttt tagccttaga gcagacagat ttctgtgatt 540
 ttgaggttca atttgagggt gtccataatg ctattcacta cttggtgggt ggtcgacaag 600
 tttatgctct ttcttctcaa cactatgctt caatgaccc agccttcttt attcatcact 660
 cctttgttga caaaatatgg gcagtctggc aagctctgca aaagaagaga aagcgtccct 720
 atcataaagc ggattgtgct cttaacatga tgaccaaacc aatgcgacca tttgcacacg 780
 atttcaatca caatggattc acaaaaatgc acgcagtccc caacactcta tttgactttc 840
 aggacctttt ctacacgtat gacaacttag aaattgctgg catgaatgtt aatcagttgg 900
 aagcggaaat caaccggcga aaaagccaaa caagagtctt tgccgggttc cttctacatg 960
 gcattggaag atcagctgat gtacgatttt ggatttgcaa gacagctgac gactgccacg 1020
 catctggcat gatctttatc ttaggagggt ctaaagagat gcactgggac tatgacagga 1080
 actttaaata cgacatcacc caagctttga aggtcagtc catacaccct gaagatgtgt 1140
 ttgacactga tgctcctttc ttcattaaag tggagggtcca tgggtgtaaac aagactgtct 1200
 tcccatcttc agctatccca gcacctacta taactctact agctggtgaa g 1251

<210> 62
 <211> 1185
 <212> DNA
 <213> Haliotis tuberculata

<220>
 <221> misc_feature
 <222> (163)..(163)
 <223> "n" is a, g, c, or t, including c

<400> 62
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 agaacctgag gcatgctctg caaagcgtga tggatgatga tggacccaat ggattccagg 120
 caattgctgc ttatcacgga agtccctcca tgtgtcacat gentgatggg agagacgttg 180
 catgttgtac tcatggaatg gcatctttcc ctactggca cagactgttt gtgaaacaga 240
 tggaggatgc actggctgcg catggagctc acattggcat accatactgg gattggacaa 300
 gtgcgttttag tcatctgcct gccctagtga ctgaccacga gcacaatccc ttccaccacg 360
 gacatattgc tcatcggaat gtggatacat ctcatctcc gagagacatg ctgttcaatg 420
 accccgaaca cgggtcagaa tcattcttct atagacaggt tctcttggct ctagaacaga 480
 cagacttctg ccaatttgaa gttcagtttg aaataacaca caatgcaatc cactcttgga 540
 ctggaggaca tactccatat ggaatgtcat cactggaata tacagcatat gatccactct 600
 tttatctcca ccattccaac actgatcgta tctgggcat ctggcaggca ctccagaaat 660
 acagagggtt tcaatacaac gcagctcatt gcgatatcca gggtctgaaa caacctctta 720
 aaccattcag cgagtccagg aatccaaacc cagtcaccag agccaattct agggcagtcg 780
 attcatttga ttatgagaga ctcaattatc aatatgacac acttaccttc cacggacatt 840
 ctatctcaga atcttgacc atgcttcaag agagaaagaa ggaagagaga acatttgacg 900
 ccttcctggt gcacggattt ggcgccagt ctgatgtttc gtttgatgtc tgcacacctg 960
 atgggtcattg tgcttttgc ggaaccttcg cgggtacttg tggggagctt gagatgccct 1020
 ggtcctttga aagattgttc cgttacgata tcacaaaggt tctcaagcag atgaatcttc 1080
 actatgattc tgagttccac tttgagttga agattgttgg cacagatgga acagaactgc 1140
 catcggatcg tatcaagagc cctaccattg aacaccatgg aggag 1185

<210> 63
 <211> 422
 <212> PRT
 <213> *Haliotis tuberculata*

<220>
 <221> SIGNAL
 <222> (1)..(15)

<400> 63
 Leu Val Gln Phe Leu Leu Val Ala Leu Val Val Gly Ala Gly Ala Asp
 1 5 10 15
 Asn Val Val Arg Lys Asp Val Ser His Leu Thr Asp Asp Glu Val Gln
 20 25 30
 Ala Leu His Gly Ala Leu His Asp Val Thr Ala Ser Thr Gly Pro Leu
 35 40 45
 Ser Phe Glu Asp Ile Thr Ser Tyr His Ala Ala Pro Ala Ser Cys Asp
 50 55 60
 Tyr Lys Gly Arg Lys Ile Ala Cys Cys Val His Gly Met Pro Ser Phe
 65 70 75 80
 Pro Phe Trp His Arg Ala Tyr Val Val Gln Ala Glu Arg Ala Leu Leu
 85 90 95
 Ser Lys Arg Lys Thr Val Gly Met Pro Tyr Trp Asp Trp Thr Gln Thr
 100 105 110
 Leu Thr His Leu Pro Ser Leu Val Thr Glu Pro Ile Tyr Ile Asp Ser
 115 120 125
 Lys Gly Gly Lys Ala Gln Thr Asn Tyr Trp Tyr Arg Gly Glu Ile Ala
 130 135 140
 Phe Ile Asn Lys Lys Thr Ala Arg Ala Val Asp Asp Arg Leu Phe Glu
 145 150 155 160
 Lys Val Glu Pro Gly His Tyr Thr His Leu Met Glu Thr Val Leu Asp
 165 170 175
 Ala Leu Glu Gln Asp Glu Phe Cys Lys Phe Glu Ile Gln Phe Glu Leu
 180 185 190
 Ala His Asn Ala Ile His Tyr Leu Val Gly Gly Lys Phe Glu Tyr Ser
 195 200 205
 Met Ser Asn Leu Glu Tyr Thr Ser Tyr Asp Pro Ile Phe Phe Leu His
 210 215 220
 His Ser Asn Val Asp Arg Leu Phe Ala Ile Trp Gln Arg Leu Gln Glu
 225 230 235 240
 Leu Arg Gly Lys Asn Pro Asn Ala Met Asp Cys Ala His Glu Leu Ala
 245 250 255
 His Gln Gln Leu Gln Pro Phe Asn Arg Asp Ser Asn Pro Val Gln Leu
 260 265 270

Thr Lys Asp His Ser Thr Pro Ala Asp Leu Phe Asp Tyr Lys Gln Leu
 275 280 285
 Gly Tyr Ser Tyr Asp Ser Leu Asn Leu Asn Gly Met Thr Pro Glu Gln
 290 295 300
 Leu Lys Thr Glu Leu Asp Glu Arg His Ser Lys Glu Arg Ala Phe Ala
 305 310 315 320
 Ser Phe Arg Leu Ser Gly Phe Gly Gly Ser Ala Asn Val Val Val Tyr
 325 330 335
 Ala Cys Val Pro Asp Asp Asp Pro Arg Ser Asp Asp Tyr Cys Glu Lys
 340 345 350
 Ala Gly Asp Phe Phe Ile Leu Gly Gly Gln Ser Glu Met Pro Trp Arg
 355 360 365
 Phe Tyr Arg Pro Phe Phe Tyr Asp Val Thr Glu Ala Val His His Leu
 370 375 380
 Gly Val Pro Leu Ser Gly His Tyr Tyr Val Lys Thr Glu Leu Phe Ser
 385 390 395 400
 Val Asn Gly Thr Ala Leu Ser Pro Asp Leu Leu Pro Gln Pro Thr Val
 405 410 415
 Ala Tyr Arg Pro Gly Lys
 420

<210> 64
 <211> 511
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 64
 Val His Arg Gly Gly Asn His Glu Asp Glu His His Asp Asp Arg Leu
 1 5 10 15
 Ala Asp Val Leu Ile Arg Lys Glu Val Asp Phe Leu Ser Leu Gln Glu
 20 25 30
 Ala Asn Ala Ile Lys Asp Ala Leu Tyr Lys Leu Gln Asn Asp Asp Ser
 35 40 45
 Lys Gly Gly Phe Glu Ala Ile Ala Gly Tyr His Gly Tyr Pro Asn Met
 50 55 60
 Cys Pro Glu Arg Gly Thr Asp Lys Tyr Pro Cys Cys Val His Gly Met
 65 70 75 80
 Pro Val Phe Pro His Trp His Arg Leu His Thr Ile Gln Met Glu Arg
 85 90 95
 Ala Leu Lys Asn His Gly Ser Pro Met Gly Ile Pro Tyr Trp Asp Trp
 100 105 110
 Thr Lys Lys Met Ser Ser Leu Pro Ser Phe Phe Gly Asp Ser Ser Asn
 115 120 125

Asn Asn Pro Phe Tyr Lys Tyr Tyr Ile Arg Gly Val Gln His Glu Thr
 130 135 140
 Thr Arg Asp Val Asn Gln Arg Leu Phe Asn Gln Thr Lys Phe Gly Glu
 145 150 155 160
 Phe Asp Tyr Leu Tyr Tyr Leu Thr Leu Gln Val Leu Glu Glu Asn Ser
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn Ala Val His
 180 185 190
 Ser Trp Leu Gly Gly Thr Gly Gln Tyr Ser Met Ser Thr Leu Glu His
 195 200 205
 Ser Ala Phe Asp Pro Val Phe Met Ile His His Ser Ser Leu Asp Arg
 210 215 220
 Ile Trp Ile Leu Trp Gln Lys Leu Gln Lys Ile Arg Met Lys Pro Tyr
 225 230 235 240
 Tyr Ala Leu Asp Cys Ala Gly Asp Arg Leu Met Lys Asp Pro Leu His
 245 250 255
 Pro Phe Asn Tyr Glu Thr Val Asn Glu Asp Glu Phe Thr Arg Ile Asn
 260 265 270
 Ser Phe Pro Ser Ile Leu Phe Asp His Tyr Arg Phe Asn Tyr Glu Tyr
 275 280 285
 Asp Asn Met Arg Ile Arg Gly Gln Asp Ile His Glu Leu Glu Glu Val
 290 295 300
 Ile Gln Glu Leu Arg Asn Lys Asp Arg Ile Phe Ala Gly Phe Val Leu
 305 310 315 320
 Ser Gly Leu Arg Ile Ser Ala Thr Val Lys Val Phe Ile His Ser Lys
 325 330 335
 Asn Asp Thr Ser His Glu Glu Tyr Ala Gly Glu Phe Ala Val Leu Gly
 340 345 350
 Gly Glu Lys Glu Met Pro Trp Ala Tyr Glu Arg Met Leu Lys Leu Asp
 355 360 365
 Ile Ser Asp Ala Val His Lys Leu His Val Lys Asp Glu Asp Ile Arg
 370 375 380
 Phe Arg Val Val Val Thr Ala Tyr Asn Gly Asp Val Val Thr Thr Arg
 385 390 395 400
 Leu Ser Gln Pro Phe Ile Val His Arg Pro Ala His Val Ala His Asp
 405 410 415
 Ile Leu Val Ile Pro Val Gly Ala Gly His Asp Leu Pro Pro Lys Val
 420 425 430
 Val Val Lys Ser Gly Thr Lys Val Glu Phe Thr Pro Ile Asp Ser Ser
 435 440 445

Val Asn Lys Ala Met Val Glu Leu Gly Ser Tyr Thr Ala Met Ala Lys
450 455 460

Cys Ile Val Pro Pro Phe Ser Tyr His Gly Phe Glu Leu Asp Lys Val
465 470 475 480

Tyr Ser Val Asp His Gly Asp Tyr Tyr Ile Ala Ala Gly Thr His Ala
485 490 495

Leu Cys Glu Gln Asn Leu Arg Leu His Ile His Val Glu His Glu
500 505 510

<210> 65

<211> 197

<212> PRT

<213> *Haliotis tuberculata*

<400> 65

Gly Leu Pro Tyr Trp Asp Trp Thr Gln His Leu Thr Gln Leu Pro Asp
1 5 10 15

Leu Val Ser Asp Pro Leu Phe Val Asp Pro Glu Gly Gly Lys Ala His
20 25 30

Asp Asn Ala Trp Tyr Arg Gly Asn Ile Lys Phe Glu Asn Lys Lys Thr
35 40 45

Ala Arg Ala Val Asp Asp Arg Leu Phe Glu Lys Val Gly Pro Gly Glu
50 55 60

Asn Thr Arg Leu Phe Glu Gly Ile Leu Asp Ala Leu Glu Gln Asp Glu
65 70 75 80

Phe Cys Asn Phe Glu Ile Gln Phe Glu Leu Ala His Asn Ala Ile His
85 90 95

Tyr Leu Val Gly Gly Arg His Thr Tyr Ser Met Ser His Leu Glu Tyr
100 105 110

Thr Ser Tyr Asp Pro Leu Phe Phe Leu His His Ser Asn Pro Asp Arg
115 120 125

Ile Phe Ala Ile Trp Glu Arg Leu Gln Val Leu Arg Gly Lys Asp Pro
130 135 140

Asn Thr Ala Asp Cys Ala His Asn Leu Ile His Glu Pro Met Glu Pro
145 150 155 160

Phe Arg Arg His Glu Pro Met Glu Pro Phe Arg Arg Asp Ser Asn Pro
165 170 175

Leu Asp Leu Thr Arg Glu Asn Ser Lys Pro Ile Asp Ser Phe Asp Tyr
180 185 190

Ala His Leu Gly Tyr
195

<210> 66
 <211> 415
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 66
 Val Thr Glu Ala Pro Ala Pro Ser Ser Asp Ala His Leu Ala Val Arg
 1 5 10 15
 Lys Asp Ile Asn His Leu Thr Arg Glu Glu Val Tyr Glu Leu Arg Arg
 20 25 30
 Ala Met Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr Gln Ala
 35 40 45
 Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Phe Pro Glu Ala
 50 55 60
 Thr Asn Arg Phe Ala Cys Cys Ile His Gly Met Ala Thr Phe Pro His
 65 70 75 80
 Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Ile Arg Arg
 85 90 95
 Gly Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Gln Pro Met Ala
 100 105 110
 His Leu Pro Gly Leu Ala Asp Asn Ala Thr Tyr Arg Asp Pro Ile Ser
 115 120 125
 Gly Asp Ser Arg His Asn Pro Phe His Asp Val Glu Val Ala Phe Glu
 130 135 140
 Asn Gly Arg Thr Glu Arg His Pro Asp Ser Arg Leu Phe Glu Gln Pro
 145 150 155 160
 Leu Phe Gly Lys His Thr Arg Leu Phe Asp Ser Ile Val Tyr Ala Phe
 165 170 175
 Glu Gln Glu Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Met Thr His
 180 185 190
 Asn Asn Ile His Ala Trp Ile Gly Gly Gly Glu Lys Tyr Ser Met Ser
 195 200 205
 Ser Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu Arg His Ser
 210 215 220
 Asn Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg
 225 230 235 240
 Asn Arg Pro Tyr Lys Ala His Cys Ala Trp Ser Glu Glu Arg Gln Pro
 245 250 255
 Leu Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr
 260 265 270
 Tyr Glu Asn Ser Val Pro Thr Asn Val Tyr Asp Tyr Glu Gly Val Leu
 275 280 285

Gly Tyr Thr Tyr Asp Asp Leu Asn Phe Gly Gly Met Asp Leu Gly Gln
 290 295 300

Leu Glu Glu Tyr Ile Gln Arg Gln Arg Gln Arg Asp Arg Thr Phe Ala
 305 310 315 320

Gly Phe Phe Leu Ser His Ile Gly Thr Ser Ala Asn Val Glu Ile Ile
 325 330 335

Ile Asp His Gly Thr Leu His Thr Ser Val Gly Thr Phe Ala Val Leu
 340 345 350

Gly Gly Glu Lys Glu Met Lys Trp Gly Phe Asp Arg Leu Tyr Lys Tyr
 355 360 365

Glu Ile Thr Asp Glu Leu Arg Gln Leu Asn Leu Arg Ala Asp Asp Val
 370 375 380

Phe Ser Ile Ser Val Lys Val Thr Asp Val Asp Gly Ser Glu Leu Ser
 385 390 395 400

Ser Glu Leu Ile Pro Ser Ala Ala Ile Ile Phe Glu Arg Ser His
 405 410 415

<210> 67

<211> 414

<212> PRT

<213> *Haliotis tuberculata*

<400> 67

Gly His His Gln Ala Asp Glu Tyr Asp Glu Val Val Thr Ala Ala Ser
 1 5 10 15

His Ile Arg Lys Asn Leu Lys Asp Leu Ser Lys Gly Glu Val Glu Ser
 20 25 30

Leu Arg Ser Ala Phe Leu Gln Leu Gln Asn Asp Gly Val Tyr Glu Asn
 35 40 45

Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Asp Asp Asn Gly Arg
 50 55 60

Lys Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
 65 70 75 80

Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
 85 90 95

Ala Val Ser Val Pro Tyr Trp Asp Trp Thr Glu Thr Phe Thr Glu Leu
 100 105 110

Pro Ser Leu Ile Ala Glu Ala Thr Tyr Phe Asn Ser Arg Gln Gln Thr
 115 120 125

Phe Asp Pro Asn Pro Phe Phe Arg Gly Lys Ile Ser Phe Glu Asn Ala
 130 135 140

Val Thr Thr Arg Asp Pro Gln Pro Glu Leu Tyr Val Asn Arg Tyr Tyr
 145 150 155 160

Tyr Gln Asn Val Met Leu Val Phe Glu Gln Asp Asn Tyr Cys Asp Phe
 165 170 175
 Glu Ile Gln Phe Glu Met Val His Asn Val Leu His Ala Trp Leu Gly
 180 185 190
 Gly Arg Ala Thr Tyr Ser Ile Ser Ser Leu Asp Tyr Ser Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
 210 215 220
 Trp Gln Glu Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp
 225 230 235 240
 Cys Ala Ile Asn Leu Met Arg Lys Pro Leu His Pro Phe Asp Asn Ser
 245 250 255
 Asp Leu Asn His Asp Pro Val Thr Phe Lys Tyr Ser Lys Pro Thr Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn Asn Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe Asn His Phe Ser Ile Pro Arg Leu Glu Glu Ile Ile Arg Ile Arg
 290 295 300
 Gln Arg Gln Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Thr Val Glu Ile Phe Val Cys Val Pro Thr Thr Ser Gly
 325 330 335
 Glu Gln Asn Cys Glu Asn Lys Ala Gly Thr Phe Ala Val Leu Gly Gly
 340 345 350
 Glu Thr Glu Met Ala Phe His Phe Asp Arg Leu Tyr Arg Phe Asp Ile
 355 360 365
 Ser Glu Thr Leu Arg Asp Leu Gly Ile Gln Leu Asp Ser His Asp Phe
 370 375 380
 Asp Leu Ser Ile Lys Ile Gln Gly Val Asn Gly Ser Tyr Leu Asp Pro
 385 390 395 400
 His Ile Leu Pro Glu Pro Ser Leu Ile Phe Val Pro Gly Ser
 405 410

<210> 68

<211> 419

<212> PRT

<213> *Haliotis tuberculata*

<400> 68

Ser Ser Phe Leu Arg Pro Asp Gly His Ser Asp Asp Ile Leu Val Arg
 1 5 10 15

Lys Glu Val Asn Ser Leu Thr Thr Arg Glu Thr Ala Ser Leu Ile His
 20 25 30

Ala Leu Lys Ser Met Gln Glu Asp His Ser Pro Asp Gly Phe Gln Ala
 35 40 45
 Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala
 50 55 60
 Ala His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln
 65 70 75 80
 Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ala Leu Arg Arg His
 85 90 95
 Gly Ala Thr Val Gly Val Pro Tyr Trp Asp Trp Leu Arg Pro Gln Ser
 100 105 110
 His Leu Pro Glu Leu Val Thr Met Glu Thr Tyr His Asp Ile Trp Ser
 115 120 125
 Asn Arg Asp Phe Pro Asn Pro Phe Tyr Gln Ala Asn Ile Glu Phe Glu
 130 135 140
 Gly Glu Asn Ile Thr Thr Glu Arg Glu Val Ile Ala Asp Lys Leu Phe
 145 150 155 160
 Val Lys Gly Gly His Val Phe Asp Lys Leu Val Leu Gln Thr Ser His
 165 170 175
 Pro Ser Ala Glu Gln Glu Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu
 180 185 190
 Ile Leu His Asn Gly Val His Thr Trp Val Gly Gly Ser Arg Thr Tyr
 195 200 205
 Ser Ile Gly His Leu His Tyr Ala Phe Tyr Asp Pro Leu Phe Tyr Leu
 210 215 220
 His His Phe Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu Gln
 225 230 235 240
 Glu Gln Arg Gly Leu Ser Gly Asp Glu Ala His Cys Ala Leu Glu Gln
 245 250 255
 Met Arg Glu Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn Trp
 260 265 270
 Asn Gln Leu Thr Gln Asp Phe Ser Arg Pro Glu Asp Thr Phe Asp Tyr
 275 280 285
 Arg Lys Phe Gly Tyr Glu Tyr Asp Asn Leu Glu Phe Leu Gly Met Ser
 290 295 300
 Val Ala Glu Leu Asp Gln Tyr Ile Ile Glu His Gln Glu Asn Asp Arg
 305 310 315 320
 Val Phe Ala Gly Phe Leu Leu Ser Gly Phe Gly Gly Ser Ala Ser Val
 325 330 335
 Asn Phe Gln Val Cys Arg Ala Asp Ser Thr Cys Gln Asp Ala Gly Tyr
 340 345 350

Phe Thr Val Leu Gly Gly Ser Ala Glu Met Ala Trp Ala Phe Asp Arg
 355 360 365

Leu Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Glu Lys Met His Leu Arg
 370 375 380

Tyr Asp Asp Asp Phe Thr Ile Ser Val Ser Leu Thr Ala Asn Asn Gly
 385 390 395 400

Thr Val Leu Ser Ser Ser Leu Ile Pro Thr Pro Ser Val Ile Phe Gln
 405 410 415

Arg Gly His

<210> 69

<211> 378

<212> PRT

<213> Megathura crenulata

<400> 69

Arg Tyr Gln Ala Thr Ala Glu Tyr His Gly Leu Pro Ala Arg Cys Pro
 1 5 10 15

Arg Pro Asp Ala Lys Asp Arg Tyr Ala Cys Cys Val His Gly Met Pro
 20 25 30

Ile Phe Pro His Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala
 35 40 45

Leu Val Gly Arg Gly Ala Thr Ile Gly Ile Pro Tyr Trp Asp Trp Thr
 50 55 60

Glu Pro Met Thr His Ile Pro Gly Leu Ala Gly Asn Lys Thr Tyr Val
 65 70 75 80

Asp Ser His Gly Ala Ser His Thr Asn Pro Phe His Ser Ser Val Ile
 85 90 95

Ala Phe Glu Glu Asn Ala Pro His Thr Lys Arg Gln Ile Asp Gln Arg
 100 105 110

Leu Phe Lys Pro Ala Thr Phe Gly His His Thr Asp Leu Phe Asn Gln
 115 120 125

Ile Leu Tyr Ala Phe Glu Gln Glu Asp Tyr Cys Asp Phe Glu Val Gln
 130 135 140

Phe Glu Ile Thr His Asn Thr Ile His Ala Trp Thr Gly Gly Ser Glu
 145 150 155 160

His Phe Ser Met Ser Ser Leu His Tyr Thr Ala Phe Asp Pro Leu Phe
 165 170 175

Tyr Phe His His Ser Asn Val Asp Arg Leu Trp Ala Val Trp Gln Ala
 180 185 190

Leu Gln Met Arg Arg His Lys Pro Tyr Arg Ala His Cys Ala Ile Ser
 195 200 205

Leu Glu His Met His Leu Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn
 210 215 220
 Asn Asn Glu Lys Thr His Ala Asn Ala Met Pro Asn Lys Ile Tyr Asp
 225 230 235 240
 Tyr Glu Asn Val Leu His Tyr Thr Tyr Glu Asp Leu Thr Phe Gly Gly
 245 250 255
 Ile Ser Leu Glu Asn Ile Glu Lys Met Ile His Glu Asn Gln Gln Glu
 260 265 270
 Asp Arg Ile Tyr Ala Gly Phe Leu Leu Ala Gly Ile Arg Thr Ser Ala
 275 280 285
 Asn Val Asp Ile Phe Ile Lys Thr Thr Asp Ser Val Gln His Lys Ala
 290 295 300
 Gly Thr Phe Ala Val Leu Gly Gly Ser Lys Glu Met Lys Trp Gly Phe
 305 310 315 320
 Asp Arg Val Phe Lys Phe Asp Ile Thr His Val Leu Lys Asp Leu Asp
 325 330 335
 Leu Thr Ala Asp Gly Asp Phe Glu Val Thr Val Asp Ile Thr Glu Val
 340 345 350
 Asp Gly Thr Lys Leu Ala Ser Ser Leu Ile Pro His Ala Ser Val Ile
 355 360 365
 Arg Glu His Ala Arg Gly Lys Leu Asn Arg
 370 375

<210> 70

<211> 419

<212> PRT

<213> Megathura crenulata

<400> 70

Asp Ser Ala His Thr Asp Asp Gly His Thr Glu Pro Val Met Ile Arg
 1 5 10 15

Lys Asp Ile Thr Gln Leu Asp Lys Arg Gln Gln Leu Ser Leu Val Lys
 20 25 30

Ala Leu Glu Ser Met Lys Ala Asp His Ser Ser Asp Gly Phe Gln Ala
 35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ala Ala
 50 55 60

Ser Lys Arg Phe Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln
 65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ser Leu Arg Lys His
 85 90 95

Gly Ala Val Val Gly Leu Pro Tyr Trp Asp Trp Thr Leu Pro Arg Ser
 100 105 110

Glu Leu Pro Glu Leu Leu Thr Val Ser Thr Ile His Asp Pro Glu Thr
 115 120 125
 Gly Arg Asp Ile Pro Asn Pro Phe Ile Gly Ser Lys Ile Glu Phe Glu
 130 135 140
 Gly Glu Asn Val His Thr Lys Arg Asp Ile Asn Arg Asp Arg Leu Phe
 145 150 155 160
 Gln Gly Ser Thr Lys Thr His His Asn Trp Phe Ile Glu Gln Ala Leu
 165 170 175
 Leu Ala Leu Glu Gln Thr Asn Tyr Cys Asp Phe Glu Val Gln Phe Glu
 180 185 190
 Ile Met His Asn Gly Val His Thr Trp Val Gly Gly Lys Glu Pro Tyr
 195 200 205
 Gly Ile Gly His Leu His Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Ile
 210 215 220
 His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Ser Leu Gln
 225 230 235 240
 Arg Phe Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Val Asn Leu
 245 250 255
 Met Lys Thr Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn Leu
 260 265 270
 Asn Asp His Thr His Asp Phe Ser Lys Pro Glu Asp Thr Phe Asp Tyr
 275 280 285
 Gln Lys Phe Gly Tyr Ile Tyr Asp Thr Leu Glu Phe Ala Gly Trp Ser
 290 295 300
 Ile Arg Gly Ile Asp His Ile Val Arg Asn Arg Gln Glu His Ser Arg
 305 310 315 320
 Val Phe Ala Gly Phe Leu Leu Glu Gly Phe Gly Thr Ser Ala Thr Val
 325 330 335
 Asp Phe Gln Val Cys Arg Thr Ala Gly Asp Cys Glu Asp Ala Gly Tyr
 340 345 350
 Phe Thr Val Leu Gly Gly Glu Lys Glu Met Pro Trp Ala Phe Asp Arg
 355 360 365
 Leu Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Asp Lys Met Asn Leu Arg
 370 375 380
 His Asp Glu Ile Phe Gln Ile Glu Val Thr Ile Thr Ser Tyr Asp Gly
 385 390 395 400
 Thr Val Leu Asp Ser Gly Leu Ile Pro Thr Pro Ser Ile Ile Tyr Asp
 405 410 415
 Pro Ala His

<210> 71
 <211> 418
 <212> PRT
 <213> Megathura crenulata

<400> 71
 His Asp Ile Ser Ser His His Leu Ser Leu Asn Lys Val Arg His Asp
 1 5 10 15
 Leu Ser Thr Leu Ser Glu Arg Asp Ile Gly Ser Leu Lys Tyr Ala Leu
 20 25 30
 Ser Ser Leu Gln Ala Asp Thr Ser Ala Asp Gly Phe Ala Ala Ile Ala
 35 40 45
 Ser Phe His Gly Leu Pro Ala Lys Cys Asn Asp Ser His Asn Asn Glu
 50 55 60
 Val Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro His Trp His Arg
 65 70 75 80
 Leu Tyr Thr Leu Gln Phe Glu Gln Ala Leu Arg Arg His Gly Ser Ser
 85 90 95
 Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Pro Ile His Asn Ile Pro
 100 105 110
 His Leu Phe Thr Asp Lys Glu Tyr Tyr Asp Val Trp Arg Asn Lys Val
 115 120 125
 Met Pro Asn Pro Phe Ala Arg Gly Tyr Val Pro Ser His Asp Thr Tyr
 130 135 140
 Thr Val Arg Asp Val Gln Glu Gly Leu Phe His Leu Thr Ser Thr Gly
 145 150 155 160
 Glu His Ser Ala Leu Leu Asn Gln Ala Leu Leu Ala Leu Glu Gln His
 165 170 175
 Asp Tyr Cys Asp Phe Ala Val Gln Phe Glu Val Met His Asn Thr Ile
 180 185 190
 His Tyr Leu Val Gly Gly Pro Gln Val Tyr Ser Leu Ser Ser Leu His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Ile Phe Phe Ile His His Ser Phe Val Asp
 210 215 220
 Lys Val Trp Ala Val Trp Gln Ala Leu Gln Glu Lys Arg Gly Leu Pro
 225 230 235 240
 Ser Asp Arg Ala Asp Cys Ala Val Ser Leu Met Thr Gln Asn Met Arg
 245 250 255
 Pro Phe His Tyr Glu Ile Asn His Asn Gln Phe Thr Lys Lys His Ala
 260 265 270
 Val Pro Asn Asp Val Phe Lys Tyr Glu Leu Leu Gly Tyr Arg Tyr Asp
 275 280 285

Asn Leu Glu Ile Gly Gly Met Asn Leu His Glu Ile Glu Lys Glu Ile
 290 295 300

Lys Asp Lys Gln His His Val Arg Val Phe Ala Gly Phe Leu Leu His
 305 310 315 320

Gly Ile Arg Thr Ser Ala Asp Val Gln Phe Gln Ile Cys Lys Thr Ser
 325 330 335

Glu Asp Cys His His Gly Gly Gln Ile Phe Val Leu Gly Gly Thr Lys
 340 345 350

Glu Met Ala Trp Ala Tyr Asn Arg Leu Phe Lys Tyr Asp Ile Thr His
 355 360 365

Ala Leu His Asp Ala His Ile Thr Pro Glu Asp Val Phe His Pro Ser
 370 375 380

Glu Pro Phe Phe Ile Lys Val Ser Val Thr Ala Val Asn Gly Thr Val
 385 390 395 400

Leu Pro Ala Ser Ile Leu His Ala Pro Thr Ile Ile Tyr Glu Pro Gly
 405 410 415

Leu Gly

<210> 72

<211> 241

<212> PRT

<213> Megathura crenulata

<400> 72

Asp His His Glu Asp His His Ser Ser Ser Met Ala Gly His Gly Val
 1 5 10 15

Arg Lys Glu Ile Asn Thr Leu Thr Thr Ala Glu Val Asp Asn Leu Lys
 20 25 30

Asp Ala Met Arg Ala Val Met Ala Asp His Gly Pro Asn Gly Tyr Gln
 35 40 45

Ala Ile Ala Ala Phe His Gly Asn Pro Pro Met Cys Pro Met Pro Asp
 50 55 60

Gly Lys Asn Tyr Ser Cys Cys Thr His Gly Met Ala Thr Phe Pro His
 65 70 75 80

Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Leu Thr Ala His
 85 90 95

Gly Ala Arg Val Gly Leu Pro Tyr Trp Asp Gly Thr Thr Ala Phe Thr
 100 105 110

Ala Leu Pro Thr Phe Val Thr Asp Glu Glu Asp Asn Pro Phe His His
 115 120 125

Gly His Ile Asp Tyr Leu Gly Val Asp Thr Thr Arg Ser Pro Arg Asp
 130 135 140

Lys Leu Phe Asn Asp Pro Glu Arg Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Phe Cys Gln Phe Glu Val
 165 170 175
 Gln Phe Glu Ile Thr His Asn Ala Ile His Ser Trp Thr Gly Gly Leu
 180 185 190
 Thr Pro Tyr Gly Met Ser Thr Leu Glu Tyr Thr Thr Tyr Asp Pro Leu
 195 200 205
 Phe Trp Leu His His Ala Asn Thr Asp Arg Ile Trp Ala Ile Trp Gln
 210 215 220
 Ala Leu Gln Glu Tyr Arg Gly Leu Pro Tyr Asp His Ala Asn Cys Glu
 225 230 235 240
 Ile

<210> 73
 <211> 98
 <212> PRT
 <213> Megathura crenulata

<400> 73
 Lys His His Glu Lys His His Glu Asp His His Glu Asp Ile Leu Val
 1 5 10 15
 Arg Lys Asn Ile His Ser Leu Ser His His Glu Ala Glu Glu Leu Arg
 20 25 30
 Asp Ala Leu Tyr Lys Leu Gln Asn Asp Glu Ser His Gly Gly Tyr Glu
 35 40 45
 His Ile Ala Gly Phe His Gly Tyr Pro Asn Leu Cys Pro Glu Lys Gly
 50 55 60
 Asp Glu Lys Tyr Pro Cys Cys Val His Gly Met Ser Ile Phe Pro His
 65 70 75 80
 Trp His Arg Leu His Thr Ile Gln Leu Glu Arg Ala Leu Lys Lys His
 85 90 95
 Gly Ser

<210> 74
 <211> 314
 <212> PRT
 <213> Megathura crenulata

<400> 74
 Gly Leu Pro Tyr Trp Asp Trp Thr Met Pro Met Ser His Leu Pro Glu
 1 5 10 15
 Leu Ala Thr Ser Glu Thr Tyr Leu Asp Pro Val Thr Gly Glu Thr Lys
 20 25 30

Asn Asn Pro Phe His His Ala Gln Val Ala Phe Glu Asn Gly Val Thr
 35 40 45
 Ser Arg Asn Pro Asp Ala Lys Leu Phe Met Lys Pro Thr Tyr Gly Asp
 50 55 60
 His Thr Tyr Leu Phe Asp Ser Met Ile Tyr Ala Phe Glu Gln Glu Asp
 65 70 75 80
 Phe Cys Asp Phe Glu Val Gln Tyr Glu Leu Thr His Asn Ala Ile His
 85 90 95
 Ala Trp Val Gly Gly Ser Glu Lys Tyr Ser Met Ser Ser Leu His Tyr
 100 105 110
 Thr Ala Phe Asp Pro Ile Phe Tyr Leu His His Ser Asn Val Asp Arg
 115 120 125
 Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Gly Lys Ser Tyr
 130 135 140
 Lys Ala His Cys Ala Ser Ser Gln Glu Arg Glu Pro Leu Lys Pro Phe
 145 150 155 160
 Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr His Asn Ser
 165 170 175
 Val Pro Thr Asn Val Tyr Asp Tyr Val Gly Val Leu His Tyr Arg Tyr
 180 185 190
 Asp Asp Leu Gln Phe Gly Gly Met Thr Met Ser Glu Leu Glu Glu Tyr
 195 200 205
 Ile His Lys Gln Thr Gln His Asp Arg Thr Phe Ala Gly Phe Phe Leu
 210 215 220
 Ser Tyr Ile Gly Thr Ser Ala Ser Val Asp Ile Phe Ile Asn Arg Glu
 225 230 235 240
 Gly His Asp Lys Tyr Lys Val Gly Ser Phe Val Val Leu Gly Gly Ser
 245 250 255
 Lys Glu Met Lys Trp Gly Phe Asp Arg Met Tyr Lys Tyr Glu Ile Thr
 260 265 270
 Glu Ala Leu Lys Thr Leu Asn Val Ala Val Asp Asp Gly Phe Ser Ile
 275 280 285
 Thr Val Glu Ile Thr Asp Val Asp Gly Ser Pro Pro Ser Ala Asp Leu
 290 295 300
 Ile Pro Pro Pro Ala Ile Ile Phe Glu Arg
 305 310

<210> 75
 <211> 416
 <212> PRT
 <213> Megathura crenulata

<400> 75

Ala	Asp	Ala	Lys	Asp	Phe	Gly	His	Ser	Arg	Lys	Ile	Arg	Lys	Ala	Val	1	5	10	15
Asp	Ser	Leu	Thr	Val	Glu	Glu	Gln	Thr	Ser	Leu	Arg	Arg	Ala	Met	Ala	20	25	30	
Asp	Leu	Gln	Asp	Asp	Lys	Thr	Ser	Gly	Gly	Phe	Gln	Gln	Ile	Ala	Ala	35	40	45	
Phe	His	Gly	Glu	Pro	Lys	Trp	Cys	Pro	Ser	Pro	Glu	Ala	Glu	Lys	Lys	50	55	60	
Phe	Ala	Cys	Cys	Val	His	Gly	Met	Ala	Val	Phe	Pro	His	Trp	His	Arg	65	70	75	80
Leu	Leu	Thr	Val	Gln	Gly	Glu	Asn	Ala	Leu	Arg	Lys	His	Gly	Phe	Thr	85	90	95	
Gly	Gly	Leu	Pro	Tyr	Trp	Asp	Trp	Thr	Arg	Ser	Met	Ser	Ala	Leu	Pro	100	105	110	
His	Phe	Val	Ala	Asp	Pro	Thr	Tyr	Asn	Asp	Ala	Ile	Ser	Ser	Gln	Glu	115	120	125	
Glu	Asp	Asn	Pro	Trp	His	His	Gly	His	Ile	Asp	Ser	Val	Gly	His	Asp	130	135	140	
Thr	Thr	Arg	Asp	Val	Arg	Asp	Asp	Leu	Tyr	Gln	Ser	Pro	Gly	Phe	Gly	145	150	155	160
His	Tyr	Thr	Asp	Ile	Ala	Lys	Gln	Val	Leu	Leu	Ala	Phe	Glu	Gln	Asp	165	170	175	
Asp	Phe	Cys	Asp	Phe	Glu	Val	Gln	Phe	Glu	Ile	Ala	His	Asn	Phe	Ile	180	185	190	
His	Ala	Leu	Val	Gly	Gly	Asn	Glu	Pro	Tyr	Ser	Met	Ser	Ser	Leu	Arg	195	200	205	
Tyr	Thr	Thr	Tyr	Asp	Pro	Ile	Phe	Phe	Leu	His	Arg	Ser	Asn	Thr	Asp	210	215	220	
Arg	Leu	Trp	Ala	Ile	Trp	Gln	Ala	Leu	Gln	Lys	Tyr	Arg	Gly	Lys	Pro	225	230	235	240
Tyr	Asn	Thr	Ala	Asn	Cys	Ala	Ile	Ala	Ser	Met	Arg	Lys	Pro	Leu	Gln	245	250	255	
Pro	Phe	Gly	Leu	Asp	Ser	Val	Ile	Asn	Pro	Asp	Asp	Glu	Thr	Arg	Glu	260	265	270	
His	Ser	Val	Pro	Phe	Arg	Val	Phe	Asp	Tyr	Lys	Asn	Asn	Phe	Asp	Tyr	275	280	285	

Glu Tyr Glu Ser Leu Ala Phe Asn Gly Leu Ser Ile Ala Gln Leu Asp
 290 295 300
 Arg Glu Leu Gln Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu His Glu Ile Gly Gln Ser Ala Leu Val Lys Phe Tyr Val Cys
 325 330 335
 Lys His Asn Val Ser Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr Ile
 340 345 350
 Leu Gly Asp Glu Ala Glu Met Pro Trp Arg Tyr Asp Arg Val Tyr Lys
 355 360 365
 Tyr Glu Ile Thr Gln Gln Leu His Asp Leu Asp Leu His Val Gly Asp
 370 375 380
 Asn Phe Phe Leu Lys Tyr Glu Ala Phe Asp Leu Asn Gly Gly Ser Leu
 385 390 395 400
 Gly Gly Ser Ile Phe Ser Gln Pro Ser Val Ile Phe Glu Pro Ala Ala
 405 410 415

<210> 76
 <211> 419
 <212> PRT
 <213> Megathura crenulata

<400> 76
 Gly Ser His Gln Ala Asp Glu Tyr Arg Glu Ala Val Thr Ser Ala Ser
 1 5 10 15
 His Ile Arg Lys Asn Ile Arg Asp Leu Ser Glu Gly Glu Ile Glu Ser
 20 25 30
 Ile Arg Ser Ala Phe Leu Gln Ile Gln Lys Glu Gly Ile Tyr Glu Asn
 35 40 45
 Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Glu His Asp Gly His
 50 55 60
 Pro Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
 65 70 75 80
 Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
 85 90 95
 Ala Val Ala Val Pro Tyr Trp Asp Trp Thr Glu Lys Ala Asp Ser Leu
 100 105 110
 Pro Ser Leu Ile Asn Asp Ala Thr Tyr Phe Asn Ser Arg Ser Gln Thr
 115 120 125
 Phe Asp Pro Asn Pro Phe Phe Arg Gly His Ile Ala Phe Glu Asn Ala
 130 135 140

Val	Thr	Ser	Arg	Asp	Pro	Gln	Pro	Glu	Leu	Trp	Asp	Asn	Lys	Asp	Phe	145	150	155	160
Tyr	Glu	Asn	Val	Met	Leu	Ala	Leu	Glu	Gln	Asp	Asn	Phe	Cys	Asp	Phe	165	170	175	
Glu	Ile	Gln	Leu	Glu	Leu	Ile	His	Asn	Ala	Leu	His	Ser	Arg	Leu	Gly	180	185	190	
Gly	Arg	Ala	Lys	Tyr	Ser	Leu	Ser	Ser	Leu	Asp	Tyr	Thr	Ala	Phe	Asp	195	200	205	
Pro	Val	Phe	Phe	Leu	His	His	Ala	Asn	Val	Asp	Arg	Ile	Trp	Ala	Ile	210	215	220	
Trp	Gln	Asp	Leu	Gln	Arg	Tyr	Arg	Lys	Lys	Pro	Tyr	Asn	Glu	Ala	Asp	225	230	235	240
Cys	Ala	Val	Asn	Glu	Met	Arg	Lys	Pro	Leu	Gln	Pro	Phe	Asn	Asn	Pro	245	250	255	
Glu	Leu	Asn	Ser	Asp	Ser	Met	Thr	Leu	Lys	His	Asn	Leu	Pro	Gln	Asp	260	265	270	
Ser	Phe	Asp	Tyr	Gln	Asn	Arg	Phe	Arg	Tyr	Gln	Tyr	Asp	Asn	Leu	Gln	275	280	285	
Phe	Asn	His	Phe	Ser	Ile	Gln	Lys	Leu	Asp	Gln	Thr	Ile	Gln	Ala	Arg	290	295	300	
Lys	Gln	His	Asp	Arg	Val	Phe	Ala	Gly	Phe	Ile	Leu	His	Asn	Ile	Gly	305	310	315	320
Thr	Ser	Ala	Val	Val	Asp	Ile	Tyr	Ile	Cys	Val	Glu	Gln	Gly	Gly	Glu	325	330	335	
Gln	Asn	Cys	Lys	Thr	Lys	Ala	Gly	Ser	Phe	Thr	Ile	Leu	Gly	Gly	Glu	340	345	350	
Thr	Glu	Met	Pro	Phe	His	Phe	Asp	Arg	Leu	Tyr	Lys	Phe	Asp	Ile	Thr	355	360	365	
Ser	Ala	Leu	His	Lys	Leu	Gly	Val	Pro	Leu	Asp	Gly	His	Gly	Phe	Asp	370	375	380	
Ile	Lys	Val	Asp	Val	Arg	Ala	Val	Asn	Gly	Ser	His	Leu	Asp	Gln	His	385	390	395	400
Ile	Leu	Asn	Glu	Pro	Ser	Leu	Leu	Phe	Val	Pro	Gly	Glu	Arg	Lys	Asn	405	410	415	
Ile	Tyr	Tyr																	

<210> 77
 <211> 413
 <212> PRT
 <213> Megathura crenulata

<400> 77
 Asp Gly Leu Ser Gln His Asn Leu Val Arg Lys Glu Val Ser Ser Leu
 1 5 10 15
 Thr Thr Leu Glu Lys His Phe Leu Arg Lys Ala Leu Lys Asn Met Gln
 20 25 30
 Ala Asp Asp Ser Pro Asp Gly Tyr Gln Ala Ile Ala Ser Phe His Ala
 35 40 45
 Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala Ala His Arg His Ala Cys
 50 55 60
 Cys Leu His Gly Met Ala Thr Phe Pro Gln Trp His Arg Leu Tyr Thr
 65 70 75 80
 Val Gln Phe Glu Asp Ser Leu Lys Arg His Gly Ser Ile Val Gly Leu
 85 90 95
 Pro Tyr Trp Asp Trp Leu Lys Pro Gln Ser Ala Leu Pro Asp Leu Val
 100 105 110
 Thr Gln Glu Thr Tyr Glu His Leu Phe Ser His Lys Thr Phe Pro Asn
 115 120 125
 Pro Phe Leu Lys Ala Asn Ile Glu Phe Glu Gly Glu Gly Val Thr Thr
 130 135 140
 Glu Arg Asp Val Asp Ala Glu His Leu Phe Ala Lys Gly Asn Leu Val
 145 150 155 160
 Tyr Asn Asn Trp Phe Cys Asn Gln Ala Leu Tyr Ala Leu Glu Gln Glu
 165 170 175
 Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile Leu His Asn Gly Ile
 180 185 190
 His Ser Trp Val Gly Gly Ser Lys Thr His Ser Ile Gly His Leu His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Ile His His Ser Gln Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Glu His Arg Gly Leu Ser
 225 230 235 240
 Gly Lys Glu Ala His Cys Ala Leu Glu Gln Met Lys Asp Pro Leu Lys
 245 250 255
 Pro Phe Ser Phe Gly Ser Pro Tyr Asn Leu Asn Lys Arg Thr Gln Glu
 260 265 270
 Phe Ser Lys Pro Glu Asp Thr Phe Asp Tyr His Arg Phe Gly Tyr Glu
 275 280 285

Tyr Asp Ser Leu Glu Phe Val Gly Met Ser Val Ser Ser Leu His Asn
290 295 300

Tyr Ile Lys Gln Gln Gln Glu Ala Asp Arg Val Phe Ala Gly Phe Leu
305 310 315 320

Leu Lys Gly Phe Gly Gln Ser Ala Ser Val Ser Phe Asp Ile Cys Arg
325 330 335

Pro Asp Gln Ser Cys Gln Glu Ala Gly Tyr Phe Ser Val Leu Gly Gly
340 345 350

Ser Ser Glu Met Pro Trp Gln Phe Asp Arg Leu Tyr Lys Tyr Asp Ile
355 360 365

Thr Lys Thr Leu Lys Asp Met Lys Leu Arg Tyr Asp Asp Thr Phe Thr
370 375 380

Ile Lys Val His Ile Lys Asp Ile Ala Gly Ala Glu Leu Asp Ser Asp
385 390 395 400

Leu Ile Pro Thr Pro Ser Val Leu Leu Glu Glu Gly Lys
405 410

<210> 78

<211> 417

<212> PRT

<213> Megathura crenulata

<400> 78

His Gly Ile Asn Val Arg His Val Gly Arg Asn Arg Ile Arg Met Glu
1 5 10 15

Leu Ser Glu Leu Thr Glu Arg Asp Leu Ala Ser Leu Lys Ser Ala Met
20 25 30

Arg Ser Leu Gln Ala Asp Asp Gly Val Asn Gly Tyr Gln Ala Ile Ala
35 40 45

Ser Phe His Gly Leu Pro Ala Ser Cys His Asp Asp Glu Gly His Glu
50 55 60

Ile Ala Cys Cys Ile His Gly Met Pro Val Phe Pro His Trp His Arg
65 70 75 80

Leu Tyr Thr Leu Gln Met Asp Met Ala Leu Leu Ser His Gly Ser Ala
85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Lys Leu Pro
100 105 110

Asp Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp Arg Asp Ala Val
115 120 125

Val Asn Asn Pro Phe Ala Lys Gly Tyr Ile Lys Ser Glu Asp Ala Tyr
130 135 140

Thr Val Arg Asp Pro Gln Asp Ile Leu Tyr His Leu Gln Asp Glu Thr
145 150 155 160

Gly Thr Ser Val Leu Leu Asp Gln Thr Leu Leu Ala Leu Glu Gln Thr
 165 170 175
 Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Val Val His Asn Ala Ile
 180 185 190
 His Tyr Leu Val Gly Gly Arg Gln Val Tyr Ala Leu Ser Ser Gln His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Ala Phe Phe Ile His His Ser Phe Val Asp
 210 215 220
 Lys Ile Trp Ala Val Trp Gln Ala Leu Gln Lys Lys Arg Lys Arg Pro
 225 230 235 240
 Tyr His Lys Ala Asp Cys Ala Leu Asn Met Met Thr Lys Pro Met Arg
 245 250 255
 Pro Phe Ala His Asp Phe Asn His Asn Gly Phe Thr Lys Met His Ala
 260 265 270
 Val Pro Asn Thr Leu Phe Asp Phe Gln Asp Leu Phe Tyr Thr Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ala Gly Met Asn Val Asn Gln Leu Glu Ala Glu Ile
 290 295 300
 Asn Arg Arg Lys Ser Gln Thr Arg Val Phe Ala Gly Phe Leu Leu His
 305 310 315 320
 Gly Ile Gly Arg Ser Ala Asp Val Arg Phe Trp Ile Cys Lys Thr Ala
 325 330 335
 Asp Asp Cys His Ala Ser Gly Met Ile Phe Ile Leu Gly Gly Ser Lys
 340 345 350
 Glu Met His Trp Ala Tyr Asp Arg Asn Phe Lys Tyr Asp Ile Thr Gln
 355 360 365
 Ala Leu Lys Ala Gln Ser Ile His Pro Glu Asp Val Phe Asp Thr Asp
 370 375 380
 Ala Pro Phe Phe Ile Lys Val Glu Val His Gly Val Asn Lys Thr Ala
 385 390 395 400
 Leu Pro Ser Ser Ala Ile Pro Ala Pro Thr Ile Ile Tyr Ser Ala Gly
 405 410 415

Glu

<210> 79
 <211> 395
 <212> PRT
 <213> Megathura crenulata

<220>
 <221> misc_feature
 <222> (55)..(55)

<223> "Xaa" is any naturally-occurring amino acid residue including Pro, Leu, His and Arg

<400> 79

Asp	His	Ile	Ala	Gly	Ser	Gly	Val	Arg	Lys	Asp	Val	Thr	Ser	Leu	Thr	1	5	10	15
Ala	Ser	Glu	Ile	Glu	Asn	Leu	Arg	His	Ala	Leu	Gln	Ser	Val	Met	Asp	20	25	30	
Asp	Asp	Gly	Pro	Asn	Gly	Phe	Gln	Ala	Ile	Ala	Ala	Tyr	His	Gly	Ser	35	40	45	
Pro	Pro	Met	Cys	His	Met	Xaa	Asp	Gly	Arg	Asp	Val	Ala	Cys	Cys	Thr	50	55	60	
His	Gly	Met	Ala	Ser	Phe	Pro	His	Trp	His	Arg	Leu	Phe	Val	Lys	Gln	65	70	75	80
Met	Glu	Asp	Ala	Leu	Ala	Ala	His	Gly	Ala	His	Ile	Gly	Ile	Pro	Tyr	85	90	95	
Trp	Asp	Trp	Thr	Ser	Ala	Phe	Ser	His	Leu	Pro	Ala	Leu	Val	Thr	Asp	100	105	110	
His	Glu	His	Asn	Pro	Phe	His	His	Gly	His	Ile	Ala	His	Arg	Asn	Val	115	120	125	
Asp	Thr	Ser	Arg	Ser	Pro	Arg	Asp	Met	Leu	Phe	Asn	Asp	Pro	Glu	His	130	135	140	
Gly	Ser	Glu	Ser	Phe	Phe	Tyr	Arg	Gln	Val	Leu	Leu	Ala	Leu	Glu	Gln	145	150	155	160
Thr	Asp	Phe	Cys	Gln	Phe	Glu	Val	Gln	Phe	Glu	Ile	Thr	His	Asn	Ala	165	170	175	
Ile	His	Ser	Trp	Thr	Gly	Gly	His	Thr	Pro	Tyr	Gly	Met	Ser	Ser	Leu	180	185	190	
Glu	Tyr	Thr	Ala	Tyr	Asp	Pro	Leu	Phe	Tyr	Leu	His	His	Ser	Asn	Thr	195	200	205	
Asp	Arg	Ile	Trp	Ala	Ile	Trp	Gln	Ala	Leu	Gln	Lys	Tyr	Arg	Gly	Phe	210	215	220	
Gln	Tyr	Asn	Ala	Ala	His	Cys	Asp	Ile	Gln	Val	Leu	Lys	Gln	Pro	Leu	225	230	235	240
Lys	Pro	Phe	Ser	Glu	Ser	Arg	Asn	Pro	Asn	Pro	Val	Thr	Arg	Ala	Asn	245	250	255	
Ser	Arg	Ala	Val	Asp	Ser	Phe	Asp	Tyr	Glu	Arg	Leu	Asn	Tyr	Gln	Tyr	260	265	270	
Asp	Thr	Leu	Thr	Phe	His	Gly	His	Ser	Ile	Ser	Glu	Leu	Asp	Ala	Met	275	280	285	
Leu	Gln	Glu	Arg	Lys	Lys	Glu	Glu	Arg	Thr	Phe	Ala	Ala	Phe	Leu	Leu	290	295	300	

His Gly Phe Gly Ala Ser Ala Asp Val Ser Phe Asp Val Cys Thr Pro
 305 310 315 320
 Asp Gly His Cys Ala Phe Ala Gly Thr Phe Ala Val Leu Gly Gly Glu
 325 330 335
 Leu Glu Met Pro Trp Ser Phe Glu Arg Leu Phe Arg Tyr Asp Ile Thr
 340 345 350
 Lys Val Leu Lys Gln Met Asn Leu His Tyr Asp Ser Glu Phe His Phe
 355 360 365
 Glu Leu Lys Ile Val Gly Thr Asp Gly Thr Glu Leu Pro Ser Asp Arg
 370 375 380
 Ile Lys Ser Pro Thr Ile Glu His His Gly Gly
 385 390 395

<210> 80
 <211> 1266
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 80
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 gcgtcgtgtg actacaaggg acggaagatc gcctgctgtg tccacgggat gccagtttc 240
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 aagggtggagc ctgggtcacta cacacatctt atggagactg tcctcgacgc tctcgaacag 540
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 gtacatcacc ttggagtccc gctaagtggc cactactatg tgaaaacaga actcttcagc 1200
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 gggaaa 1266

<210> 81
 <211> 1257
 <212> DNA
 <213> *Haliotis tuberculata*

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 gccgacacat ccgttgatgg gtaccaggct acagtagagt accatggcct tctgtctcgt 180
 tgtccacgac cagatgcaaa agtcaggctt gcctgttgta tgcattggcat ggcattcttc 240
 cctcactggc accggctggt cgttaccagc gtggaagatg ctcttgtagc gcgtggatcg 300

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aatatatctt ttgaggaggg acaccatcac acgagcagga tgatagattc gaaactgttt 480
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<210> 82

<211> 1242

<212> DNA

<213> *Haliotis tuberculata*

<400> 82

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ggtggattca atcagcttgg cgcttcccat ggagagccta aatggtgccc taatcctgaa 180
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gcttatggca tggcatcgct gagatataca gcatacgatc caatcttttt cttgcatcat 660
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<210> 83

<211> 1239

<212> DNA

<213> *Haliotis tuberculata*

<400> 83

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ttgaatgatc ataattattg gtgttggtgc catggatgac ctaccttccc ccagtggcac 240
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gagcttgttc ataacgcact tcattccatg ctgggaggtg aagggcagta ctccatgtcc 600

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gaccgtttgt	ataaatttga	aatcaccaaa	ccactgcaac	agttaggagt	caagctgcat	1140
ggtggagttt	tcgaactgga	gcttgagatc	aaggcataca	acgggttcta	tctggatccc	1200
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<210> 84

<211> 1260

<212> DNA

<213> *Haliotis tuberculata*

<400> 84

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cgctccgctg	atgggtacca	agccattgcc	tctttccatg	ccctgccacc	actctgtccc	180
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tggcacagac	tgtacactgt	tcaggttcag	gatgccctga	ggagacatgg	ttcacttggt	300
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gcaacatttt	atcatccaat	ccggaatatt	aatatttcaa	atccattcct	cggggctgac	420
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gacatgaacc	tgaggcacga	ggacactttc	tctatagacg	taactatcac	gtcttacaat	1200
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<210> 85

<211> 1251

<212> DNA

<213> *Haliotis tuberculata*

<400> 85

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<210> 86

<211> 1209

<212> DNA

<213> *Haliotis tuberculata*

<400> 86

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<210> 87

<211> 1536

<212> DNA

<213> *Haliotis tuberculata*

<400> 87

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<210> 88

<211> 591

<212> DNA

<213> *Haliotis tuberculata*

<400> 88

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<210> 89

<211> 1245

<212> DNA

<213> *Haliotis tuberculata*

<400> 89

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<210> 90

<211> 1251

<212> DNA

<213> *Haliotis tuberculata*

<400> 90

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<210> 91

<211> 1242

<212> DNA

<213> *Haliotis tuberculata*

<400> 91

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<210> 92

<211> 1257

<212> DNA

<213> *Haliotis tuberculata*

<400> 92

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<210> 93

<211> 1248

<212> DNA

<213> *Haliotis tuberculata*

<400> 93

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<210> 94

<211> 1206

<212> DNA

<213> *Haliotis tuberculata*

<400> 94

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<210> 95

<211> 1548

<212> DNA

<213> *Haliotis tuberculata*

<220>

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<223> "n" is a, g, c, or t, including c or t

<400> 95

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<210> 96

<211> 966

<212> DNA

<213> *Megathura crenulata*

<400> 96

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<210> 97

<211> 1242

<212> DNA

<213> Megathura crenulata

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<211> 1236

<212> DNA

<213> Megathura crenulata

<400> 98

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<210> 99
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 <212> DNA
 <213> Megathura crenulata

<400> 99

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<210> 100
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 <212> DNA
 <213> Megathura crenulata

<400> 100

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<210> 101
 <211> 510
 <212> DNA
 <213> Megathura crenulata

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 <212> DNA
 <213> Megathura crenulata

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<210> 103
 <211> 1248
 <212> DNA
 <213> Megathura crenulata

<400> 103
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<210> 104

<211> 1257

<212> DNA

<213> Megathura crenulata

<400> 104

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<210> 105

<211> 1239

<212> DNA

<213> Megathura crenulata

<400> 105

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1239

<210> 106

<211> 1251

<212> DNA

<213> Megathura crenulata

<400> 106

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<210> 107

<211> 1185

<212> DNA

<213> Megathura crenulata

<220>

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<223> "n" is a, g, c, or t

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<210> 108

<211> 309

<212> DNA

<213> Megathura crenulata

<400> 108

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<211> 2561

<212> DNA

<213> Haliotis tuberculata

<400> 109

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<211> 659

<212> DNA

<213> *Haliotis tuberculata*

<400> 111

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 <212> DNA
 <213> *Haliotis tuberculata*

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 <211> 543
 <212> DNA
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<210> 114
 <211> 2689
 <212> DNA
 <213> *Haliotis tuberculata*

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<210> 115

<211> 561

<212> DNA

<213> *Haliotis tuberculata*

<400> 115

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gtaagtaaat ttacaaaatt tgggtgttctc taactatcct aagtattcaa tcgttagcgt 60
gtacctatct gcataatgca ataccctgac tccatataag tatagtatat ttactctggt 120
cgaaaacaaa caaattgaaa acaagagtgg acgtgctgtt atgattttct tttcattctt 180
ggttcgttgt gtaatgccac agccagcaat tccagatata tagcgacggg ctatgaatac 240
tccagtctgg accagacaat cgtgtggaat ggtttaggca cattatatca aattcattgt 300
tgaagatatg agttatgagg tcacaatgtt gtcttggtac cccgtgtcag tagtgacgtc 360
atttcatgac tgaatctctt tcaacgccgt ttagcaataa taggctcagt agtattcaac 420
caattacaat cagtagaaaa ttctctatac tattcttatg ttgcatcctg atatccctat 480
gcaaaaatta gtcactaat ataactattt tcgataaata ctttgggcaa acaaatcaat 540
gtaacatcta ttttctttca g 561

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<210> 116

<211> 334

<212> DNA

<213> *Haliotis tuberculata*

<400> 116

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gtacgtggat ttgattacat agcaatgcta tatgatttca gtaattacaa cctcaagtca 60
tgtagccgtt ttagattgca ttacatcaaa cagcattgga ttaaattggg ggattgtcca 120
ggccgcatta tgttgcatc cgaaaatagt ttgtgtccag tgtccacgtt taaaattaaa 180
ccattttaat catattaggg ataattttta tagatgttat agtgctttat ttcattattgt 240
tacagtggac agtcaccaag gacatatttt actctataga tacacaaaca ccaattaaaa 300
ccctgctttg gaaagtctaa ctttttcccc acag 334

```


<210> 117
 <211> 283
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 117
 gtaatgccat ctttaatacag ttcgttcggt aaattatata tggtcgttta caacaccata 60
 ccttgaattg aggtaataca tcaacttgata ttgataatgt aatggtaatt gttcttgttt 120
 gtaaaaccgt ttctgggggtg tttattcact atccacctgg tggatagtga gtaaacacat 180
 tcggtttaat atgggtatct aatggacagt gaagtgtgct ggctaggcag ataccttggg 240
 ttctgtgaat ggaggtagta gaaaggggtt ttgatgattg cag 283

<210> 118
 <211> 174
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 118
 gtgagtacct gtttgcacta agacttctgt aggctaaaag tgtaagaaat atcaattaat 60
 ttcaattcac ccaaacttga aaacgggtacc tatatagggt aactttttgt ctacagtaaa 120
 ctgaacatac ctacacattt catgaaatga tctctcaata ttttccacca acag 174

<210> 119
 <211> 703
 <212> DNA
 <213> *Haliotis tuberculata*

<220>
 <221> misc_feature
 <222> (478)..(478)
 <223> "n" is a, g, c, or t

<400> 119
 gtaaatattac agagctttat gaagtgtggt cagagtgaag agaccaagat atacttatac 60
 ccaaaaactag ctagcaacag acgatttcac ttgtttcggg cactttgtat tatacgttgg 120
 atcccaaggt aaacggaaac gtaaccgaga atcagtcctg aaagtgaagt agtgagtttg 180
 gggctttaacg tcgcactcag caatacccca gctatgtggc gactctcaga tttactgctg 240
 gaggagaacc tacatagccc ggtttaaccc gtgtggtatg tagtaagacc agcgcggcat 300
 ggctgggtatc tgacggacga aggggtggcg tgcacgtatt ccagtgggtac aacactgcac 360
 cccaatttca ccgaccggag aactgatctc cccttcggag atatcgctg ccttccacgg 420
 gattcgaact cgtgacactt caagccagcg cgcttctagc gggggcgatt agaggttnaa 480
 ggccgacggc tctaccacct taactatccc ccggcccccac tcctgacgga aatgtttata 540
 attcagcctt tgttttctta ttaaactctc ttggcagatt ttctatagat aatggattca 600
 catgtagaca gtctccattt gttgtaactg gtagtcaaga gtagaatct gaatacatte 660
 tccaagatgg atcaaggaaa acaataatta cttgatgttg cag 703

<210> 120
 <211> 298
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 120
 gtgagatata tgcaaattga atgttgtcca gatgcgttgt ttacatttat atgcttggaa 60
 ttgtcctgaa cgaatacagt ggaataacca aaagctgaaa aataaaaaaga tatatacttc 120
 attctgaatt tgtcagtatt gctgacccaa aaacacgtta tccatgtcga cactatattt 180
 gcctttctga atctgagact gcgttatgtt tctaataatc acgaaatatg gtatacaggt 240
 tgtgtatctg tagaatacc aaggcagaat ttaaagggtc acaccctgtt taatacag 298

<210> 121
 <211> 963
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 121
 gtaagtttgt gttgggttagt gttgggttgca tgttttgcca tatcgatagt atcagtgtgg 60
 taacatctgg tttctagttc attcagttca ccttatcaga agctgtttgc tctcgtctac 120
 aatagtgacg tctttcagtt ttagaacctg gtacatccgg gttatattgg tctccagcaa 180
 cccgtgcttg tctggtggag ccactgatgg gaacgggtgg tcagactcgc tcacttagtt 240
 gacacatgtc aattgcgaag atcgatgctg aggttggtta acattggatt gtctgggtcca 300
 gactcgatta ttacagaca gccgccatgt acctggaata ttgctgagtg cggcgtaaa 360
 caacaaacta gtcagactaa tctttcactg tttataatga tggctcgaac cttagcactca 420
 tgtcccaagt tggcgaacat ctggaaggga atttcaaagt aaaagaacaa tctttcacgt 480
 ctattggtat cacgctcctg gagaagaaca tgatgttcac ggcgttactt cctcttacct 540
 gttttacttg tttccacgtt tcttcatatt taaagagtat ttgggtatta gagctttggt 600
 gctgttacaa tgctactcaa ctgttcagtg cggcgaccg cgcttggtta cacattaagt 660
 tttgtttgtt ggttggtttg tgtgtgtgtg tgtatgtgtg tgtgtgtgtg tgtgtgtgtg 720
 tgtgtgtgtg tgtgtatcta tgtctatgtg tctgtgtctg tgtgtctgtc tatgtgtgtg 780
 tgtgtctgtg tctatgtgtg tgtctgcgtg tgtgtctgtg tccgtatgtg gctgtgtcta 840
 tgtgtgtgtg tgtctgtgtt tatgtgtgta tatgcgtgtg tgtctgtgtc cgtatgtggc 900
 tgtgtctatg tgtgtgacat gcaatacatg ctgtgatact cactagctgc gtctatcgac 960
 cag 963

<210> 122
 <211> 650
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 122
 gtaagagcgg ggtagggatg ggggtggtagg ggggtgggttg ttctattact tcccgttca 60
 cttgtatgaa atggataacc ttggctgcat cccaattgcg tgatcgattc tctttcgatt 120
 cactcgtgcg attagactgc cttattttact atagtagtta gaatgttgct cagtgcgccg 180
 ttaaacaact aatacacaaa accgcatttg ttttatatgg tcaactctact gtttatcacg 240
 tatatgtatg ttccgactca ctggttggtg cgtaccattc tactgtcaca ctgagagcca 300
 atgttctcag atgtgtgaaa tgtttgaaag ccgtttctac ataattattgc aggaatacca 360
 ttgtagaatg tagtcaaaca ggtaacaatc tgtagtgag cccagttcga ggttgcggtg 420
 taggggtgag tccaacaggt aggcagtcga taagcatagt ttttaagcat tttagatcat 480
 ctataattaa ccacatgggt agccgctatg tttagtttaa tccagtataa gttagaactg 540
 ttatatattc aaggggaagt agtaaatcct tattccttga ctaccattta atagatttcc 600
 caatgactcc attcaactcc taactttcac atcactgctc tcttcaacag 650

<210> 123
 <211> 583
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 123
 gtgagtacga caggcatttc tagtaaaaaac ctacttttgg taaaagggttc gagaaatcac 60
 ttgaagcaac aacatgattt tgtaacgcct attacacgtg aacatgtcac acccggtgat 120
 gccgtttaat ggacatgcct ctgttaatga aaggggtaag tacatgtgta tggggatggg 180
 atgggagcca cctgtcccaa tttcataggt ccctaggatc ccagtgcgt aggaatcccc 240
 tgattaatgc cttgtgaatt cctcctggaa ttgtcctggc ccaaattttt acaaaccgcg 300
 cccgatatac cttggaaata attgggccta aggggtggggc ttttaaggac caagaacca 360
 acctaaaccc caaccattt tttcccaccc attccagggt ttgttttacc aaataaaaag 420
 gtttccactt tgaggaaacc ctttaagggt tcttttcagg gctttttttc ttttctggga 480
 attccaattc cgggggaaca aaatacatat atttcacaga cctttggtca aatttatata 540
 atttccgact tcatgtcata ggtttgtctt tcttcctaca cag 583

<210> 124
 <211> 475
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 124
 gtgaggagaa ggccccaggc tagcagggca atggatgaag gaaatagggg caaagggaat 60
 agcagttaca ccatcgacat ttccaacctc ctcagaaact aatatatagc cttaatacaa 120
 ccagccaaga ctcaacgggc agccgggggtg gggggatttg gtggctcgctg tttcagacca 180
 ggggtgcaaaa tatcagtgcg caaatcaaca tgttgctgtg cagacactga cacagcagtc 240
 attgaacctg cagacccata acaggaaaat ggggcagata cgatcaaaga cagtgtaaaa 300
 tagggataag taggcatatg caaccacctg atggaaatga aaaggggtaa gtttaaaccc 360
 cggctaccaa aggtccaatg gttccttaac ccagcttacg ctatccctct aatttcagta 420
 ttgagctgat ttctgtcgag ttcagtataa ctgtatactt tctgtattat tacag 475

<210> 125
 <211> 1002
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 125
 gtaagggatc tcagatccgt cagagtgaat gagtgagtga gtgagtggcc agcaactgaa 60
 gctaggccgc cctactgggg atcacaggga atgtatgtca atgggtgaag aaaggagcag 120
 tgggttacaa cgccgcgttc aaagtcatgg cagtttcata gcgcattgtg cgcgctgtg 180
 tatctgtgtg cgcgctgtg tgcctgcgtg cgtgtgagtg agtccgcttg tgcatttgta 240
 ctagcacaga ctaatgctgg ttctagagag cctactgata aatgtttaca ttaagatctt 300
 tacagtatac tgagattcga gccagacca gcggaacacc aggcagggtg acaacaaata 360
 acgcctttcc acacaaccga cgcagcctaa agtggctctg ataggctgat accgggtgat 420
 tcttagaact tgtaatttgt gctttgccat aatacatgta cttcagttaa ctgtaataca 480
 gcataagact ggaccgggtg ttacgacgca atgagcaata attactctac gaaaagattt 540
 ggtagacat attcaataat tgtaacattc attacaatg aacaccacgt gcactctcgt 600
 ttgtgtcaac gtattcataa tcattctcat gcactgtta gctcagatat tttgatgttt 660
 caagagattt gtacgaacgt atgggctggg gccccatgaa attacatata atgaattcag 720
 gtgaaatacc tggcgagaca ataagatctt actagtgtg ccacttcagt atgggtgtccc 780
 cgatgggtgc tgggtgtatg gtgtgtttgg cgtcagttgt tactggaaaa gtcagctcta 840
 attatgtctt tatgtgtgta aagaccccat aacctagatg tctgggttta acttaacatg 900
 atagtaacag tcggctgtat agcctgacgc ttaaaccgta gatgaataag gactatattg 960
 tgttgataaa catttctata acctcctttc tatatcattt ag 1002

<210> 126
 <211> 597
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 126
 gtgagtcacg ttctctgatg gtcacgagtc acgttctctg atggtcacga gtcacgttct 60
 ctgatggcca cgagtcacgt tctctgatgg tcacgagtca cattctctga tggtcacgag 120
 tcacattctc tgttgagtga agtctcagta ccatttattt ctcttacctt cttctaacca 180
 ggggtttcag cgtggatcgt ctgagaagtt agcgcaaata tatattgaag tcatttttct 240
 atcatataac catcggtata tccacgtgcg aaagtgttca ttaattattt ttattttcat 300
 ttatgaaggt ctaaaagaaa atatgtattg ttggaaacta tattcgaagg tgaaggcaac 360
 acgagtgtat taatattctc aatatcaatg tacgctctgt cagcacctgt ttcaccagga 420
 actacacctt tagcgtacca aaatatcagc tgatgatttc gaagcggact ataccctcac 480
 cacttgtttt gtgtgtgtat ttatgtgtgc atgtgtgtgc gtgctgtcgt gtgtgtgtgt 540
 gtccacagta tgttgatatt ttgttctgac tgtatatgtt cgtgcttacc attgaag 597

<210> 127
 <211> 689
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 127
 gtatgtatga ttctaataat gaatgttttt acctccggtt taaacaatat tttagtatta 60
 cgaaaggaga agtacctcga gaggtctagg tctcagatgt ttagaaaccc atgaagacag 120
 gtatgtctct gaaaaacaaa gtaacatcat gaggctaaaag ttcagattca aaccatcgt 180
 gttcgaatcc agcatgcaaa gggccctaac cctgtagatg gcgctgcttg aaacagagta 240
 gtctgttcag ggtcagtgat gtccccacaa acatcatagt cagggtcagt actgtcccca 300
 caaacatcat agtcagggtc agtactgtcc ccacaaacat cacagtcagg gtttaattttg 360
 gattcggttt cgaatgcgaa gaagacagtc acgccctgac actggaccga ggttgccgag 420
 aaagctcgtg atattgctgg aatactgccc agtaaaacca tcattttattt taggctattt 480
 attacgaaaa ataataatat gtatagaaat gcatatgatc gctgtttgaa tgtaaaattt 540
 agaatgggtt tgggagtggt cactattttt tcatcaaaat ttcagtgatt ttaaccgatc 600
 gacgctgaag acaaaactacc gttaatcagg cagttcattc atatctgata ggggaatattg 660
 gttgttaacc aacgctacat tgtgtccag 689

<210> 128
 <211> 846
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 128
 gtaaatggcc attgtatata tgcattcatt tggactttga gtgagtgagt ggatgcgcat 60
 tcagtaagtg agagtgtgag tgggtattag gtctgtgagt ggggttggtga gtggatgggt 120
 gagtaagagt ggggttggtga gaaagtgagt gagtcacttg gtgggtgcgt tagtggaagc 180
 gtgattgagt ggatgggagg taggtgagt agtgaattgg tgggggggtg agtgagggtta 240
 acgctgttct gctgttcaat cacaccacat gttgcccagc tactgtgcag gacgaatcca 300
 ggggttggtt aaattttata tgtttatata taacgatgga cgtgtctgga tgtggcgaat 360
 gtgtcaagag aattatgcgg ctttgtgctg ctccgcgtat ttattgcacg cgcgttggtta 420
 cgcggttgat aaagtagttc aaaacatttc ccagccatct ttgtctgttg tgaaaacctt 480
 ctccaggacc atccatttca atatgtgtct gcgttcattg agttatacat gttaaactgt 540
 agagcgcaga tgagcacact tgagcatttc ttcagtaaat cagaatgtgt atatttcaaa 600
 atttaccaaa tgcaatatca tcaagcaaat tatgcagctc tatagtaaca tcggagtcaa 660
 tgggtccagt tgccctcggc tgccattccg acctccctgg ccagaatata ccccggtcag 720
 gatcagttat ccgtcagaag gcacgggtgcg gaatgaaaac ataaacacat agtcgcttag 780
 tagtatgctg atttaggcac gcaaaatccg aatgtgaatt actgtgaatt gcattacctg 840
 ttacag 846

<210> 129
 <211> 474
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 129
 gtaagtagct acctgtttat tcaatttttt cgcttttgcca atcaattcat tcagcttgaa 60
 attcaataat tgtgttttgc atggctgaaa accaatttga actcttttct tttctcaggt 120
 cgaactcaaa taaataatca ctaattgtta tgcacgcggg tagggcatac atactatata 180
 cacatcggtc atctcaaaat gcaaacaat tgtcttattt ccgttgggac aagcaaacc 240
 ctttctctgt aatcttgctt ttggcatcca ctggaattaa tgttgactgg taattgatac 300
 tggctctctt cttgcataga gttaatatct atagtttgta aatctttatg attttgctat 360
 ttatatttct acagcatgct atagacaccc tagactattg tatagccact tgtattgttt 420
 ttccatttat tatttataac agaacatggc ttgtaatttt tatttacctt ccag 474

<210> 130
 <211> 290
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 130
 gtgagaacat tgataatagt tcaaatagaag tatatccgat tcaagctgtc gatacaagat 60
 gagataacata atcacaatgt ttgtattaga tatctctctt aatttaaatgc cgctttttatc 120
 aatattcgag caatccttca gcaacataca ccagcaaatg tttcatcaac agactatatatt 180
 atttaatatatt ttaaaaaatcc ttctctgttg ttataaatac ttaaagatc gaattccttg 240
 aatgcgtctt ctctgcagca tatagttaag ttgttgtgtt tctctgtcag 290

<210> 131

<211> 298

<212> DNA

<213> *Haliotis tuberculata*

<400> 131
 gtaagaaagt ttcactgtct aaatcttttt ttatgataga gggtagagaa gtggagacaa 60
 tgtgacaata tattgaataa agttgtttta aatttataac tctcataagt tcatattatg 120
 ctgaagctgt agccatctat aactgtgtta catgaaatgt taagacatta acctaaatac 180
 ttcagctgat aacaaaacaa tgttaataca tacgtcaatg taacattttc ttatcttttag 240
 gttatagcat aaacacttca gagatacagt gacgaaaacc tctattttaa tatttcag 298

<210> 132

<211> 189

<212> DNA

<213> *Haliotis tuberculata*

<400> 132
 gtaagtagta aactgctcag attgttttca taattactcc actattaagt aaaaagtact 60
 agtaattcaa tagtactgtt cacagagaaa tgtaacacaa tagaccacag agtccatttg 120
 ttaaagcctt ttggcttggt aagtctgaga ttttggtgac tgatggaaag ctaaaatata 180
 ttttgacag 189

<210> 133

<211> 821

<212> DNA

<213> *Haliotis tuberculata*

<400> 133
 gtatatattaa gtattttatc ttacgcatga ccctgaccct atttattttt ttttaatect 60
 cggatttggt taatcctgtt accagcgaag gtccgggtta gaattgatct tcagtcaact 120
 attcttgtcg taggactaac gagttgtctg gcttgcttac tcgggtgaca cgtgtcaacg 180
 gatcccaatt gcaattagat cgatgctcat gctgttgatc cctggattgc ctgggtccgga 240
 ctccacatac cgccgccata ttgctggtat attgtcgaat gcgacgctaa acagcaagcc 300
 aaccaacaat actgagacct ggtggtacat gtcagttctc tattgctggg gttccaaaca 360
 tagccatcag ttgaaatatt tcatacatag aagaatacct ctgaatatga tgatgaaaca 420
 tttacttaga cttgcctgtg agccccaggc aaaatgcact gtaaaaatac actgacagag 480
 gattaggcat tcttgggagt actgtatagt tagttgcata catattagcg ttccctcact 540
 aaaacgaatc tctgaatgct atcaattaaa gatcatgatg ctttgattgt gtctactgta 600
 tttaaaatgg tgtaagatt tgcaattaca atatacacia acacgtttcc tgcactcgg 660
 agaatgcaat ctttcgttgt acgctgtctgt tttcatattt ttatgcatgt agtttgcact 720
 acttagcgtc caataaatcc attcacaaaa tcacacaaac aaacgatttt aggaatgtga 780
 ctgtagctgc aacgaatata cctgatcctt tcttgttcca g 821

<210> 134

<211> 866

<212> DNA

<213> *Haliotis tuberculata*

<400> 134
 gtgagagAAC cagtaatagc tactgtctac aaagaatgtg ttcattttaa gacctgactg 60
 taggccgatg gctgctgtca tctcctccgc ctccctcctc tggtcctcct ccgaaggggt 120
 cagcttcagg ttctcttgcc aatatgccaa gcagacctcc tgagcaggca gtatatatac 180
 gtaaggggaa caagtatgga ccacgcgcgc gcattgtagag atacaatgat cagctgtctg 240

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ctgttccact cctgtcagac aatgagataa acatgaatac agtattactc agcagcggttc 300
caattttcaa cctcgttatt tattaaaaaa aggaattttt aatatatttt tctccttggt 360
gaaatatttt agtaactggt aatcgatata gagtggagta gtgacgcttt atttcgggttc 420
attctcgaaa caaaaatata atagtccact gaactctctt aaattgtttt tacaaccttc 480
aactgccaca gacgtaatcc ctcacgttat tttagagctga caacgtgttg aattgagtggt 540
gttccgaatt ctaaataagc atgtatatat ttacgtctca tgcaagtaat atatgtttta 600
ctgatgacgt cacttggtga ccactgattt agttcctttg tcataattgc agtttctggt 660
gtcacgggga cgggtgggaa gccaggttcc tcctgtcacg ctgaatatcc cgttcgaatc 720
ccccacatgg gtacaaagtg tgatgcctat ttctggtgtc cccaccgtg atattgctgg 780
aataagtggc ttaataccat atacactcac tctattgtca cactactgcc accgggtcac 840
acctctgatg cttctgttct atccag 866

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<210> 135

<211> 785

<212> DNA

<213> *Haliotis tuberculata*

<400> 135

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gtaattaatg gatgtgaagt caatgtccga ggggtataata aggattttaa tacttcagtc 60
gtgtaatact gtatgacatg tgtattggat ggtgtaggta ttacagggtta taaggccagt 120
gtgtgttggg acggttactt tcctgcaacta gtaataagca ttgtatttag ctagctttta 180
tcatataact ttagtttcat ggtttgtggc aattgaaatc gaaattttct ttcatttcaa 240
ggttatcgca ctcgtgtggt agaatagtta ctatgctgca ttgagaataa cactatagta 300
ataaagcata tcatacagta agaataacac tatagtaata aagtatatca tacagtaaga 360
atgtcattgt atgataaata gggtatcaca ctcgtgtggt ttagaatggt tactatccca 420
ggaataacca ctatgtatta catgtatatt gggcagtgta agtagtagca ttgtatatta 480
aatcagtata tcgtgcttca aaacaccagg atatatgggg tatacagtggt gcagtgtgta 540
tagcaacatt gtatattaaa tcagtatatc gtacttcaaa acaccaggat tatgggggat 600
acagtgggca gtgtaagtag tagcattgta tattaaatca gtatatcgta cttcaaaaaca 660
ccaggatata attcagtata tcgtgcttca aaacaccagg atataattca gtatatcggt 720
cttcaaaaaca ccaggatata tgggatatac agtgcggtt tgcatacaac ctccaccctt 780
tacag 785

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<210> 136

<211> 378

<212> DNA

<213> *Haliotis tuberculata*

<400> 136

```

gtcagtttag tctcctgtct gagctaacga taccaatttc ctattttcga gaaccacgat 60
gacgagaaaa caagcaatat agatatagat gcagtataga tcaagttaat gaattcattg 120
ctatatgttt gcttgtaata aactttaaga aaacgagagc atgcacacaa atgaaacaaa 180
caattatgtg ttgatagga atatgatata tgtatttggg ggctgacgtg agcagggttg 240
aaggacagt ttacattgtc agtaacactg ggagtattct ttgatccaca atatatagtt 300
tcattgtggt cagcagttac aactaacatt atatcataca ttacgtcgta acatgcttct 360
tttgcctct tctgccag 378

```

<210> 137

<211> 398

<212> DNA

<213> *Haliotis tuberculata*

<400> 137

```

gtatgttata ttattatcaa atgtgtaatc agatactgga gacgttttca tattaacttg 60
gtcagcatta gttgatgatt ttggtgcgat attgacgaca aggagttaag cattaacacg 120
ttcaacacat ctttaactctg atatgagaag ggaataaatt gatccagat tgatgattga 180
agttagatta acagtgaag atataccagt ttgataatc gtataaaaaca gtagcagaat 240
tgtatcgtga aaactaaatg tgggaaggcg aacgccagc agattttaga ttacgatcgt 300
gtgctagaat aattcacaat aaccagacg tcggaaatgt gggtgtctat ggcaatagtt 360
acgattaatt gctaacatgc acgatttacc tatttcag 398

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<210> 138
 <211> 522
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 138
 gtgagataag aaacccttct aacagtaata cgacaccaca ttacagctta aacatgattg 60
 ccatcgatgt ttatcatgtgt agtatacgct ttacagttct acataatttt gtttttcaaa 120
 tcaagtttag caaatgaatc tatcactgga aaatagggtg gggtagccaa gtgggttaaag 180
 cggtcactga tcacgccaaa gacgagtgtc ctaacctgca tgggtacaaa agtgaagacc 240
 attgctggtg tctaccgocg taatattgtt tttagtattg ctaaaactta tactcaccca 300
 tgcgctgtaa aagtggaata ataatcatat ttcaacaaaa gcacaaaacc atttcatttt 360
 catgaaagcc tcttgttcac ctgaaagacg caagagaaca atagttccta acattatttt 420
 cagacattgg aaatgtcctg cacgtgtaaa ccatatatcc tttgaaattt ttacgactgc 480
 atcgtatata atttatgata taaattttaa actttatttc ag 522

<210> 139
 <211> 673
 <212> DNA
 <213> *Megathura crenulata*

<400> 139
 gttttgtaat aattatgtag aattctttac ctcagaataa gatgaggtca catggggtttt 60
 gcaaaactat tacgttcgaa ttaatatata taataccgga ccctccactg gtacatattt 120
 atctttataa cgataatagc gatgatgatg atgatgatga tgatgatgat gatgatgata 180
 atgatgatgc cggatttgca cgtaatccag ccgacttaga tgacacccta aggggtgcaga 240
 aagtataaca attagattgc gtttgcatct gtgtatgcgt gtgctttaac caaaagtcaa 300
 aataaaagtg caaaccctta gtttattcat ttgatagagc cttttacgat aagaacaatg 360
 taataaatta gaacataact gaaacctccg aaagaaggcc tgtttgtcaa gagagggtatc 420
 gacatgattg acttataaac ctgtgcttct atattttgga actgtccact ttcttggtgt 480
 gtgtactgta atcacatcgc actatggctg caagacgtgt acgagtacac tatatactta 540
 cctaattgacc aaccacaagg ctggctttgt taatattgtt atttcacaga aataaacaca 600
 gaattccagc atttggtcgg tgtatttagc aaaacaccga tatgacactc atgttttatt 660
 acattttttt cag 673

<210> 140
 <211> 273
 <212> DNA
 <213> *Megathura crenulata*

<400> 140
 gtacttgtaa tatgtttcga atattgccga taccttcaat atatatactt tatcaaagta 60
 attgattaat ctgaagtaat ttccctttcc agtagagatt cagttgatac aacaagaatt 120
 cgccctgttg tatgtcactt tattttcact aaacgattcg aagtgaagctg tccatgccac 180
 aatgggggtc ctgtaacttt ctcgatggg gtatagatta tatagacgtg gcagacctta 240
 cgtataacta atatttggtg aatgtcgttt cag 273

<210> 141
 <211> 241
 <212> DNA
 <213> *Megathura crenulata*

<400> 141
 gtaactatatt tgtcactgta accaacaact gcagtctatt ttgcaattac gataataaca 60
 atttttgaaa tatatcttta ttaaagcaaa gggtttctaga gacaaacagc cggctccta 120
 tatttttttcg aacttacgct tgagtaaaga tctgcaaatg gcaaccctac ctatactatt 180
 aaaaatataa tggtacattc gtatctgaat gtttaataaa tcacttcata ttctgttgca 240
 g 241

<210> 142
 <211> 327
 <212> DNA
 <213> Megathura crenulata

<400> 142
 gtaagtatac acacattatt tctcttctgc tatatcagat gaagagaacg ttgtatcact 60
 aacctagtct tgtttgattt gtggtttcgt ttgcttcctg aacagtaggg ttgatttaac 120
 ttctctgttt cgtctgtacc aatgaaagac tatgatgctt gtgtgaagat gctttgttca 180
 tgagtcagtc tgttcttgta atgctttgat ctttgccatc aacattcttg aaattaatta 240
 tggtttcctt taaatactta catattacat ttaaactgct ctgcttgtct gattgcatat 300
 tctttcaaaa ataactatat attccag 327

<210> 143
 <211> 958
 <212> DNA
 <213> Megathura crenulata

<220>
 <221> misc_feature
 <222> (584)..(584)
 <223> "n" is a, g, c, t

<220>
 <221> misc_feature
 <222> (596)..(596)
 <223> "n" is a, g, c, t

<400> 143
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 ggtcccgga tgtttcttct tcatctatca ttattttgat acggataagt aaaaatcggc 120
 tgagtaaaac atccgggtaa gtaaaatgat tttcgaggtc ttttcatcgg ataagtaaga 180
 tacacaagtg atcattccaa taaacactaa ctgatgcaac acaataccag cgcacagtgt 240
 tttcactacg tttgtttgta ttgtaattaa caattaacac ttaagtgttt cccaatgtgt 300
 cegtgtgcaa actgattggg acaaagcttg caacaagccc ggcaattcca tgtcgtttat 360
 gtctacgttt gttattctga ctgcttggag gggttcggaa aaaaataaaa aacgggtaaa 420
 tattataaaa aattcacggg gccttgaaat tttaggtgtc cggatttcac tgtagatgat 480
 taattttctca ctgttaaaca aaaggacccc agtaccctca ttcgtgacgt acgttataaa 540
 atgtaattat aaaaagccca ttatcatggt atacgtgatc ttgncttgca attatnctac 600
 cgctttcttg attttttaa gcaatttctc cctctatgaa cttattaaca tagcactcct 660
 gcaaaagaaa acagtactg catggatcca tattgaatgt tgctgcttat ttctcatttt 720
 attactcaca gatatttcaa gaacatcgta ctctctaacc aggctaaagc aaagagggtt 780
 acatttttagc cgacaagttc actagctgag tggaacacgt atatattaat ggagatgact 840
 ctggctcatga tgattaggac aattatcatg acgttatcat tgatcatgac catgtcagta 900
 taatagatag ctaacaaata atgtaattac taattatgaa gcaatgggtgc atttgcag 958

<210> 144
 <211> 868
 <212> DNA
 <213> Megathura crenulata

<400> 144
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 ttttccaggc acgcttcaac cctccccccc ccccccccc ccccccccc ccccccccc 180
 cccatcatgc ttttctgtaa aacataaaaac accaattaac aatgttctta gtgtgtttgt 240
 tgactccctt ccactgcaac gcctacataa tcaaagtgtt cgtttttttc caaactttcc 300
 agttagtgtt gaagactaaa aagttaaata agcattcaca taacttctaa gagcaactgg 360
 gaccatgcag ttacgtattg atatttctgt gagagtgaag caaaacactg tttttcaagc 420
 ttaggtttat caatcaaaat gtccaatagt tcatgttatc gaaaaggcag cgaaggataa 480
 gaggtccga gacatcttgt ctattctcgt gtccatatga tatcaactga ggagcttcca 540


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ttacattttt gaccttatca tttaaagaca tacatggaac attttcattt tacagttaaa 600
gtgaaccact tcaggttcaa cttcaacttc gaattcaact tctgttgtgt gttttatgag 660
ccgactgaaa tagagtgcct tactttcact tctagtttcg ttctgtctcg tcatcgttgt 720
ttctttcagt gtgcatagta cacgcctagt atagaacaca cgaacttgct cttacttaat 780
agattctgaa actattatgt ggaaagtgtg caggctatag taacatcctg gcaaaattat 840
catgtatcct cttgtttgtc ataattag                                     868

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<210> 145

<211> 1766

<212> DNA

<213> Megathura crenulata

<400> 145

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gtatgtattt cccactgggtg gtcgctgact gccaacacat acttgtaatt tattcatgaa 60
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caccacaaag cttcaaaacg cccaaaacat tctaatagcg atatatattgt taaaagacca 180
aaatatagcc ttacaacaat agattatttt aataagacca gtcagtgcac gcaaatcgat 240
tggaactttt gaaataaaat attctatgta ctaactgcc aatctcataat acttgccttg 300
gatgtgcttc tttttcacat tcgctgcgag cttcaactcc aatgcataag cttaaaaata 360
atcataaaca caaacaata gccacagagg cgacgatccc tccaggccag gctttatttg 420
tctcttatag aatatatcgc tattagaatg tttttgacgt tttgaagctt tgtgggtgaa 480
aattcgtgat gtttatgcgt ggtatttatg taagatgaaa ataaatatat cttttcaaac 540
aagatttttg tattttgaag acttctatga ataaattaca cttatgtgtt aggttatttg 600
tactgagcgc cttgtggat tttcccttct tcaatttgtt tgttctttgt tcaatttcga 660
atagttatcc tactgtggat agtctatatg agaactcgtt aaagaataat acaattctaa 720
tggaattgaa cttctttaac ttttatttgc aactgccacg ttctcggtata cgttcttatg 780
ccgtcatcaa gcatacgagt gtacatgtat gccaaaacgc tgcaaatata aattaaagaa 840
gttgcaatcc ataagaattt caatgttctt tcatcatcac atcaacttct aaaaatgcct 900
ataaaacaat caacaaacgt acaatagtac attaccggat ctgcgcagcat gaccacgtcg 960
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tataaatact cttcaaaaaa gtagggggaa ttggaatttc aagggtcaata acaactaat 1080
gataataaca attggtccca aataataaca attggtccca aactaattgt atctttacaa 1140
agaagaaatt gagtgaacaa ttcacccggt attttattac ctaaacggtt tctcttgctg 1200
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tcacaaagta cgttctttca tgttggtgaa gagaatatca aggtcttcta agggattgtg 1620
tcttataata tttgatttta agaagtttga tattatctgc atccttccca agaaattgca 1680
aatgttcaca cactattgcg tttgataatg tttttgggga aataaactgt ccaggactgc 1740
taaatagtaa ttattgctac ttttag                                     1766

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<210> 146

<211> 1049

<212> DNA

<213> Megathura crenulata

<220>

<221> misc_feature

<222> (290)..(318)

<223> "n" is a, g, c, t

<400> 146

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cgatatatca caaacaaaag tattcaaagc tttaaacacg atatgtatgg ttcaagaatg 120
acatcattaa caaggacat gagtctgaaa taaacatgac ttgacaccgt tgtggtcaca 180
gttttgtttc tcattggtga acctgtgaaa caacctttca aacccaaaaga tgcctattaa 240
tattgttaat tcccatgaat taggagatac acacattcta ctgtcatttn nnnnnnnnnn 300
nnnnnnnnnn nnnnnnnnaa taaccgcttc cagcatgaaa acacaatatg attatctcaa 360

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ttctaccatt	actaattata	atthttgactg	gcattatthtg	acgacgcgta	aaacatcgct	420
gctttacaga	ctgcactgcg	gtaactgtga	cgthtttcatg	acgtcactac	attctattca	480
aaacattttcc	ctagaagagc	gagaccacgg	ccgtgatggg	ttctgggcag	atgattaccc	540
aagtatatat	ttataataac	ttgactgctt	gcctgaataa	tgttgacaca	tgacaacgaa	600
tttgtgatag	cgtaagaagc	gtgaatactg	tgaatagtgt	gaggggtgtt	tgctgagagt	660
taaccaccgt	taattgcaaa	attcccgaat	acttgcatth	gcagtcgaag	aagaattgca	720
ttcttactcc	tgtgaatgga	ctcattgtta	tttagcagcg	gttattgagg	ttttgatcac	780
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gatgggcttg	cctgtgaaaa	tatgctgcga	gttcagtaac	actthttccct	ttcgatcatg	900
gcctgtthttg	ctctgaatct	ggctthttcag	aggatccctg	ctthttttaaa	actaaagtcc	960
tcccaactca	cttatattta	tgtthttttaa	ttattttatag	ttthtaatatg	aacaacaaat	1020
catattttatt	tacacattat	atthtttcag				1049

<210> 147

<211> 1846

<212> DNA

<213> Megathura crenulata

<400> 147

gtatttaaaa	aagtaataaa	accatatttht	cgaatgcgct	ttatgaaata	tcgtgtgact	60
ggthctttag	tttacatgga	gtgtaacaac	atgtcccatc	agttgacata	tactgtctcac	120
acaaagtaag	ggatatthga	taatgataac	aaatataatc	aaagcggtht	tactatcaag	180
acttattcac	ataattacag	gtgaaggag	gtgtgatcgt	gttcactgat	caggthtgagg	240
ccagagaagt	cccagthttga	gtcttgacga	agatgatgtt	taggcattggg	gtcgaatcac	300
caaaatcaca	tgacttcaat	aacgggttg	accacctcga	gcgacgatgc	aagcagtaga	360
gcgtctacgc	atgtctcctga	taaggcgacc	aatctgttcc	tggggaatca	gtcgccactc	420
ctcttgtagt	gccacgctca	thttctgtac	ggctcctgggt	acctgtctatc	gggtcttgat	480
ccgtatccca	aggatgtccc	acacatgttc	aaggthgagag	gtcggggaac	atcgctggcc	540
acggtaaagg	ctgaattthga	tgccgttgaa	agthgagctct	gacaacctga	gcatggthgag	600
ctctgacgtt	gtcgtcctga	aagatgaatc	cagctccatg	acagcgagca	aagggcagga	660
cgtgttggtc	aatgcagtht	tctctgcagt	acacacctgt	cactcgccac	tcacaagcgt	720
gtagatctgt	acgaccagtc	atggagatcc	cagcccat	cataacggac	ccctatccat	780
accgatcatg	agccaccata	gcagcgtctt	gatgacgttc	thccctgtcgc	ctcgacatcc	840
tcacacggcc	aaaaggaacg	tggactcgtc	actgaacatg	acattagcca	acctggcact	900
tgtccaccgc	tgatgttggc	gagaccattc	cagtcgagct	cttcgggtgtc	tggctthtcat	960
cgataaacacg	acgtaaggth	tgcgggcgtg	caagacggct	ctatgcaggc	gattthcggt	1020
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attgagatgg	cgattcctta	ggactgtgga	gatgatgaat	cgatcttgac	ttatggthgg	1140
gacattagga	cgtcgggttc	gtgtcctatc	ctgcatctth	ccagthgttc	ggthgacgtc	1200
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atgaaaaaca	cgtthctatgg	gtcgtgcaca	ctthacatga	caagtgtgaa	aagtgactth	1440
cacccctthg	tgtgttcgga	tgcacactct	gtthacgtac	tgatgcgatt	tggcgtctaa	1500
acatgtthttg	gcgtctaaac	atgtththcct	gcattgattca	tatactattth	tgtcatattc	1560
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taattatgat	gacactthcca	cacatagtht	cagthgattgt	aattcaactg	tacacactth	1740
thcccgthaac	atthcaggatc	tatatgacta	aatatataaac	attagthatac	gtgcagthth	1800
gtatcgctac	gacattgttg	taactcttht	thttaatcatt	taacag		1846

<210> 148

<211> 166

<212> DNA

<213> Megathura crenulata

<400> 148

gtatgtthtt	aatgtcactth	atccgtgatc	tgtaatgaag	ttagcaattc	actthtatcaa	60
ctgtthtggct	gtactgttht	agthgcgagth	thactthagg	tggattaatt	aaaatattca	120
agctcataaa	tgtthtggatt	caactthttht	tattthattth	aaacag		166

<210> 149
<211> 726
<212> DNA
<213> Megathura crenulata

<220>
<221> misc_feature
<222> (388)..(388)
<223> "n" is a, g, c, t

<400> 149
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acataactac cttcaacggc acaatatcca tatgatgcc tggccagcaa tgaggcctga 120
tcttttcccc attaaaaatg tctggaacat cttgggcaaa cgtgtgcgtc aacgtaaaac 180
gccaccagtc acgctagatg aacttgtcca ggcgttggtg gaagaatggg acagactgca 240
tcaattacca taagtagact catttgcagc gaatcagtc gtgtttgacc aataacgggg 300
gcattacgca ctactgacgc aaaacaatgt caatttccgt ttcttaccce ttccttcttt 360
cacggaccat aacagcaaga gaaactgntt aggtaatgaa ataccgggtga attattgtta 420
actggattcc ttctttgtaa agatacaatt agtttgggac caattattat tatcattagt 480
ttgttattga ccttgaaatt cgaagttcct ctacattttt taaggagttt atttgattga 540
caatgaaatg taagaaaaga gcaaatcgta aaatacgtta aaaattattc cttaaacatc 600
agtctctaac ttcagtttaa attgccagta acacgtgtta tatgatgttt ccgtttctct 660
ttgtttttta gcattcaact tatttgatat aacgttttac tgtttttagat tcacatcaaa 720
ctgcag 726

<210> 150
<211> 383
<212> DNA
<213> Megathura crenulata

<400> 150
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tattgttcag tgccagtaac cgtttattta cgtaaagtgt acaggctatt ataatacaaa 120
atacattacc gatattgttt accacacaat tatatcattg tcaaaatcta cccccattac 180
ctgcgttttg aatttgtaac cttctgacaa aaatgaatta gcaagagctc tgatgaagaa 240
cataatgaac aacacctatc tttcttcttt caatgacggg ttaacaatac aatgcacaat 300
gtaaaaaaat atatatatat atataatttt atatctacag ttaatgcaaa tgactccact 360
aattcagggg aacacatttt cag 383

<210> 151
<211> 306
<212> DNA
<213> Megathura crenulata

<400> 151
gtaaaaataa acgtccagtc atcggaacc cgcccagata tatgggtttt tttctattta 60
aacaaaaaag cagagacaaa aagattatta aaagtcacat ttaacttgat atcagatcaa 120
tagtttggtt agttagtgtt ctatatccct caaatccttc gaatctttaa gcctcgtgat 180
attttgacaa acagagaaga cttagtagcc cagactttcc cttatttttt cctgaaaatc 240
ttaatacggg tattaatatg attcattctg caacctacaa ccatagccca tatgttatta 300
tttcag 306

<210> 152
<211> 627
<212> DNA
<213> Megathura crenulata

<400> 152
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gccggtggtt gctctcctct cctcctccac caccacgggt acctccacct gtcagggcat 120
caatgtacca tgaaaatgtc tacaatacta ggcctcctgt agaagcacgt aagatttaca 180

tggccgggttt gtaactagtt taaagtgcctt cacagtaacc aaaaccagtc tctaaagatt 240
aatgtctggt taaaatttaa tgccacattt tcaactgaca tattcttgca attaagtaca 300
aatgaagtag tataaattat ccacaaatag cgtgatgcac cacaaatata aaccgagtgc 360
ttttttggca ttccccactt gttctggcat gatcacatca tagatctcgt tcatgaagat 420
actgttggat gctttttccc aatatgcccc aatctgttaa attatttaca cgaccgcagt 480
gtgtactttc atcactcaga tctttacaat gtgtttgtaa cgttttacaat tagcgttatg 540
attgaaatat taccctctgc tacgttaaatt cacattcact cactcatctg atgtacttta 600
caggtcatac cgatgatcac ggctcag 627

<210> 153

<211> 266

<212> DNA

<213> Megathura crenulata

<400> 153

gtcagtatcc tccaatatgt ttgactagtg tcttgctcat gtatcaacta ttttaggcaa 60
cgtttttgat tggtatgga ttttcatgat atgattttat tgctacctct ataccctaac 120
aaaaatgttt tatcaacaat tggttgagtt ttaatgcaag aaaattatca ggagtagcgt 180
gcaaaaatga ctggaaggca tgggtgtactt ctgtgtgtac atacaagtgg gtaatgcctt 240
attgaactcg taatcactcg tttcag 266

<210> 154

<211> 266

<212> DNA

<213> Megathura crenulata

<400> 154

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cgtttttgat tggtatgga ttttcatgat atgattttat tgctacctct ataccctaac 120
aaaaatgttt tatcaacaat tggttgagtt ttaatgcaag aaaattatca ggagtagcgt 180
gcaaaaatga ctggaaggca tgggtgtactt ctgtgtgtac atacaagtgg gtaatgcctt 240
attgaactcg taatcactcg tttcag 266

<210> 155

<211> 190

<212> DNA

<213> Megathura crenulata

<400> 155

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caatttatat agcctttgag cttcagatgt attacggaca ggcattacag tatacatgta 120
atatgggttt ctgctatttg caaaaattgt gtcctatctc tgttcagatc atcatggcgg 180
tgacacctag 190

<210> 156

<211> 403

<212> PRT

<213> Haliotis tuberculata

<400> 156

Gly Leu Pro Tyr Trp Asp Trp Thr Gln His Leu Thr Gln Leu Pro Asp
1 5 10 15

Leu Val Ser Asp Pro Leu Phe Val Asp Pro Glu Gly Gly Lys Ala His
20 25 30

Asp Asn Ala Trp Tyr Arg Gly Asn Ile Lys Phe Glu Asn Lys Lys Thr
35 40 45

Ala Arg Ala Val Asp Asp Arg Leu Phe Glu Lys Val Gly Pro Gly Glu
50 55 60

Asn Thr Arg Leu Phe Glu Gly Ile Leu Asp Ala Leu Glu Gln Asp Glu
 65 70 75 80
 Phe Cys Asn Phe Glu Ile Gln Phe Glu Leu Ala His Asn Ala Ile His
 85 90 95
 Tyr Leu Val Gly Gly Arg His Thr Tyr Ser Met Ser His Leu Glu Tyr
 100 105 110
 Thr Ser Tyr Asp Pro Leu Phe Phe Leu His His Ser Asn Thr Asp Arg
 115 120 125
 Ile Phe Ala Ile Trp Gln Arg Leu Gln Val Leu Arg Gly Lys Asp Pro
 130 135 140
 Asn Thr Ala Asp Cys Ala His Asn Leu Ile His Glu Pro Met Glu Pro
 145 150 155 160
 Phe Arg Arg Asp Ser Asn Pro Leu Asp Leu Thr Arg Glu Asn Ser Lys
 165 170 175
 Pro Ile Asp Ser Phe Asp Tyr Ala His Leu Gly Tyr Gln Tyr Asp Asp
 180 185 190
 Leu Thr Leu Asn Gly Met Thr Pro Glu Glu Leu Asn Ser Tyr Leu His
 195 200 205
 Glu Arg Ser Gly Lys Glu Gly Val Phe Ala Ser Phe Arg Leu Ser Gly
 210 215 220
 Phe Gly Gly Ser Ala Asn Val Val Val Tyr Ala Cys Arg Pro Ala His
 225 230 235 240
 Asp Glu Met Ala Val Asp Gln Cys Asp Lys Ala Gly Asp Phe Phe Val
 245 250 255
 Leu Gly Gly Pro Thr Glu Met Pro Trp Arg Phe Tyr Arg Ala Phe His
 260 265 270
 Phe Asp Val Thr Asp Ser Ile Asp Asn Ile Asp Lys Asp Arg His Gly
 275 280 285
 His Tyr Tyr Val Lys Ala Glu Leu Phe Ser Val Asn Gly Ser Ala Leu
 290 295 300
 Pro Asn Asp Leu Leu Pro Gln Pro Thr Ile Ser His Arg Pro Ala Arg
 305 310 315 320
 Gly His Val Asp Glu Ala Pro Ala Pro Ser Ser Asp Ala His Leu Ala
 325 330 335
 Val Arg Lys Asp Ile Asn His Leu Thr Arg Glu Glu Val Tyr Glu Leu
 340 345 350
 Arg Arg Ala Met Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr
 355 360 365
 Gln Ala Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Phe Pro
 370 375 380

Glu Ala Thr Asn Arg Phe Ala Cys Cys Ile His Gly Met Ala Thr Phe
 385 390 395 400

Pro His Trp

<210> 157
 <211> 973
 <212> DNA
 <213> *Haliotis tuberculata*

<220>
 <223> Domain a, parts 1-4

<400> 157
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 cccttggttg tcgacccgga aggaggaaag gcccatgaca acgcatggta tcgtggaaac 120
 atcaagtttg agaataagaa gactgcaaga gctgttgacg atcgctttt cgagaagggt 180
 ggaccaggag agaataacccg actctttgaa ggaattctcg atgctcttga acaggatgaa 240
 ttctgcaact tcgagatcca gtttgagttg gtcacaacg ctatccacta cctgggtggc 300
 ggccgtcaca cgtactccat gtctcatctc gagtacacct cctacgaccc cctcttcttc 360
 ctccatcact ccaacaccga cgcctcttc gccatctggc aacgtcttca ggtactcaga 420
 ggaaaggacc ccaacaccgc cgactgcgca cacaacctca tccatgagcc catggaaccg 480
 ttccgtcggg actcgaaccc tcttgacctc accagggaaa actccaaacc aattgacagc 540
 tttgattatg cccaccttgg ctaccagtat gatgacttga ccctgaacgg tatgacccca 600
 gaggaattga actcatatct gcatgaacgg tcaggcaagg aggggggtgtt cgcaagcttc 660
 cgactctcag gttttggcgg ctctgctaac gttgtgtct acgcatgccg tccctgccac 720
 gatgaaatgg ctgtcgatca gtgcgacaaa gccggcgact tctttgtgtt gggcggaccc 780
 accgagatgc cctggagggt ttacagagca ttccacttcg acgtcaccga cagcatcgac 840
 aacatcgaca aggaccgcca cggccactat tatgtaaagg cggaattatt cagtgtaaat 900
 ggaagtgcgc taccgaatga tctcctgcct caaccacca tctcacacag gccagcccgc 960
 ggacacgttg atg 973

<210> 158
 <211> 103
 <212> PRT
 <213> *Megathura crenulata*

<400> 158
 Gly His Asp His Ser Glu Arg His Asp Gly Phe Phe Arg Lys Glu Val
 1 5 10 15
 Gly Ser Leu Ser Leu Asp Glu Ala Asn Asp Leu Lys Asn Ala Leu Tyr
 20 25 30
 Lys Leu Gln Asn Asp Gln Gly Pro Asn Gly Tyr Glu Ser Ile Ala Gly
 35 40 45
 Tyr His Gly Tyr Pro Phe Leu Cys Pro Glu His Gly Glu Asp Gln Tyr
 50 55 60
 Ala Cys Cys Val His Gly Met Pro Val Phe Pro His Trp His Arg Leu
 65 70 75 80
 His Thr Ile Gln Phe Glu Arg Ala Leu Lys Glu His Gly Ser His Leu
 85 90 95
 Gly Leu Pro Tyr Trp Asp Trp
 100

<210> 159
 <211> 310
 <212> DNA
 <213> Megathura crenulata

<400> 159
 gtcacgatca cagtgaacgt cacgatggat ttttcaggaa ggaagtcggt tccctgtccc 60
 tggatgaagc caatgacctt aaaaatgcac tgtacaagct gcagaatgat caggggtccca 120
 atggatatga atcaatagcc gggttaccatg gctatccatt cctctgccct gaacatggtg 180
 aagaccagta cgcattgctgt gtccacggaa tgcctgtatt tccacattgg cacagacttc 240
 atacaatcca gtttgagaga gctctcaaag aacatgggtc tcatttgggt ctgccatact 300
 gggactggac 310

<210> 160
 <211> 32
 <212> DNA
 <213> Haliotis tuberculata

<400> 160
 ggcttggtca gtttctactc gtcgcccttg tg 32

<210> 161
 <211> 16
 <212> DNA
 <213> Haliotis tuberculata

<400> 161
 gtgggggctg gagcag 16

<210> 162
 <211> 350
 <212> DNA
 <213> Haliotis tuberculata

<400> 162
 acaacgtcgt cagaaaggac gtgagtcacc tcacagttga cgaggtgcaa gctcttcacg 60
 gcgccttcca tgacgtcact gcattctacag ggctctgag ttctgaagac ataacatctt 120
 accatgccgc accagcgtcg tgtgactaca agggacggaa gatcgccctgc tgtgtccacg 180
 gtatgccagc tttcccttcc tggcacaggc catatgtcgt ccaagccgag cgggcactgt 240
 tgtccaaacg gaagactgtc ggaatgcctt actgggactg gacgcaaacg ctgactcact 300
 taccatctct tgtgactgaa cccatctaca ttgacagtaa aggtggaaag 350

<210> 163
 <211> 221
 <212> DNA
 <213> Haliotis tuberculata

<400> 163
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 gctgtagatg atgcctatt cgagaagggtg gagcctggtc actacacaca tcttatggag 120
 actgtcctcg acgtctcga acaggacgaa ttctgtaaatt ttgaaatcca gttcgagttg 180
 gctcataatg ctatccatta cttggttggc ggtaaatttg a 221

<210> 164
 <211> 255
 <212> DNA
 <213> Haliotis tuberculata

<400> 164

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atattcaatg tcaaaacttg aatacacctc ctacgacccc atcttcttcc tccaccactc 60
caacggtgac cgcctcttcg ccatctggca gcgtcttcag gaactgcgag gaaagaatcc 120
caatgcaatg gactgtgcac atgaactcgc tcaccagcaa ctccaaccct tcaacaggga 180
cagcaatcca gtccagctca caaaggacca ctcgacacct gctgacctct ttgattacaa 240
acaacttggg tacag                                     255

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<210> 165

<211> 407

<212> DNA

<213> *Haliotis tuberculata*

<400> 165

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ctacgacagc ttaaacctga atggaatgac gccagaacag ctgaaaacag aactagacga 60
acgccactcc aaagaacgtg cgtttgcaag cttccgactc agtggctttg ggggttctgc 120
caacggtgtt gtctatgcat gtgtccctga tgatgatcca cgcagtgatg actactgcga 180
gaaagcaggc gacttcttca ttcttggggg tcaaagcgaa atgccgtgga gattctacag 240
acccttcttc tatgatgtaa ctgaagcggg acatcacctt ggagtccgc taagtggcca 300
ctactatgtg aaaacagAAC tcttcagcgt gaatggcaca gcactttcac ctgatcttct 360
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<210> 166

<211> 1245

<212> DNA

<213> *Haliotis tuberculata*

<400> 166

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ttgatgggta ccaggctaca gtagagtacc atggccttcc tgctcgttgt ccacgaccag 180
atgcaaaagt caggttcgcc tgttgtatgc atggcatggc atccttcctt cactggcacc 240
ggctgttcgt taccagggtg gaagatgctc ttgtacggcg tggatcgcct atcgggtgttc 300
cttattggga ctggacaaaa cctatgactc acctccaga cttggcatca aatgagacgt 360
acgtagaccc gtatggacat acacatcata atccattctt caatgcaaAT atattctttg 420
aggaggggaca ccatcacacg agcaggatga tagattcgaa actgtttgcc ccagtgcgtt 480
ttggggagca ttcccatctg tttgatggaa tcctgtacgc atttgagcag gaagatttct 540
gcgactttga gattcagttt gagttagtcc ataattctat tcatgcgtgg ataggcgggt 600
ccgaagatta ctccatggcc accctgcatt acacagcctt tgaccccat ttctaccttc 660
atcattccaa tgcgatcgt ctatgggcaa tctggcaagc tcttcaaATC aggagacaca 720
agccatatca agcccactgt gcacagtctg tggaaacagtt gccaatgaag ccatttgctt 780
tcccatcacc tcttaacaac aacgagaaga cacatagtca ttcagtcccg actgacattt 840
atgactacga ggaagtgcgt cactacagct acgatgatct aacgtttggt gggatgaacc 900
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cgtttgaccg cttgtataag gtcgaaataa ctgactcatt gaagacatt tctctcgatg 1140
tcgatggaga ttatgaagtc acttttaaaa ttcatgatat gcacggaaac gctcttgata 1200
cggacctgat tccacacgca gcagttgttt ctgagccagc tcacc                                     1245

```

<210> 167

<211> 1242

<212> DNA

<213> *Haliotis tuberculata*

<400> 167

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ctacctttga ggatgaaaag cacagcttac gaatcagaaa aaatgtcgac agcttgactc 60
ctgaagaaac aaatgaactg cgtaaagccc tggagcttct tgaaaatgat catactgcag 120
gtggattcaa tcagcttggc gccttccatg gagagcctaa atggtgccct aatcctgaag 180
cggagcacia ggttgcacgc tgtgttcacg gcatggctgt tttccctcat tggcacaggc 240
ttcttgctct ccaggcggag aatgctctta gaaagcatgg gtacagtggg gctctacat 300
actgggattg gactgcgcc ctttcccaac ttcctgatct ggtagtcat gacgagtata 360
cagatccttc cgaccatcac gtgaagcata acccgtgggt caatggccac atcgatacag 420

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taaatcagga	taccaccaga	agcgtacggg	aggatcttta	tcaacaacct	gaatttggac	480
atttcacgga	tattgctcaa	caagtcctct	tagcattaga	acaagatgac	ttctgttcgt	540
ttgaagtga	gtatgagatt	tcccataatt	ttatccatgc	acttgtagga	ggaaccgacg	600
cttatggcat	ggcatcgctg	agatatacag	catacgatcc	aatctttttc	ttgcatcatt	660
caaacaccga	caggatctgg	gctatattggc	aatccctgca	aaaatacaga	ggcaaaccgt	720
acaacactgc	caactgcgcc	atagaatcta	tgagaaggcc	cctgcaacca	tttggactaa	780
gcagtgccat	taaccctgac	agaatcacca	gagagcatgc	tatcccgttt	gatgtcttca	840
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cacaacttga	tagagagctg	gaaaaaatca	agagtcacga	aagagtattt	gctggattct	960
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atgaccgact	tttcaagtat	gatattactc	aggttctgga	agcaaaccat	ctacacttct	1140
atgatcatct	cttcattcgc	tacgaagtct	ttgatcttaa	aggagtgagt	ttgggaactg	1200
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<210> 168

<211> 1239

<212> DNA

<213> *Haliotis tuberculata*

<400> 168

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atttgaacga	cctcaatacc	ggagaaatgg	aaagccttag	agctgctttc	ctgcatattc	120
aggacgacgg	aacatatgaa	tctattgccc	agtaccatgg	caaaccaggc	aaatgtcaat	180
tgaatgatca	taatatggcg	tggtgtgtcc	atggtatgcc	taccttcccc	cagtggcaca	240
gactgtatgt	ggttcaggtg	gagaatgctc	tcctaaacag	gggatctggg	gtggctgttc	300
cttactggga	gtggactgct	cccatagacc	atctaccta	tttcattgat	gatgcaacat	360
acttcaattc	ccgacaacag	cggtagcacc	ctaacccttt	cttcagggga	aagggtactt	420
ttgaaaacgc	agtcacaaca	agggaccac	aagccgggct	cttcaactca	gattatatgt	480
atgagaatgt	tttacttgca	ctggagcagg	aaaattattg	tgactttgaa	attcagtttg	540
agcttgttca	taacgcactt	cattccatgc	tgggaggtaa	agggcagtag	tccatgtcct	600
ccctggacta	ttctgcgttt	gatcccgtct	tttccctaca	tcattgccaac	acggacagac	660
tgtgggcaat	ctggcaggaa	ctacaaagat	tccgagaact	gccttatgaa	gaagcgaact	720
gtgcaatcaa	cctcatgcat	caaccactga	agccgttcag	tgatccacat	gagaatcacg	780
acaatgtcac	tttgaaatac	tcaaaaccac	aggacggatt	cgactaccag	aaccacttcg	840
gatacaagta	tgacaacctt	gagttccatc	acttatctat	cccaagtctt	gatgctaccc	900
tgaagcaaag	gagaaatcac	gacagagtgt	ttgcgggctt	ccttcttcat	aacataggaa	960
cttctgctga	cataactatc	tacatatgtc	tgctgacgg	acggcgtggc	aatgactgca	1020
gtcatgaggc	gggaacattc	tatatcctcg	gaggcgaac	agagatgcct	tttatctttg	1080
accgtttgta	taaatattgaa	atcaccaaac	cactgcaaca	gttaggagtc	aagctgcata	1140
gtggagtttt	cgaactggag	cttgagatca	aggcatacaa	cggttcctat	ctggatcccc	1200
atacctttga	tccaactatc	atctttgaac	ctggaacag			1239

<210> 169

<211> 1260

<212> DNA

<213> *Haliotis tuberculata*

<400> 169

atacccatat	cttggaccac	gaccatgagg	aagagatact	tgtcaggaag	aatataattg	60
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gctccgctga	tgggtaccaa	gccattgcct	ctttccatgc	cctgccacca	ctctgtccca	180
atccatctgc	agctcacctg	tatgcttgct	gtgtccatgg	catggctaca	tttccccagt	240
ggcacagact	gtacactggt	caggttcagg	atgccctgag	gagacatggg	tcacttggtg	300
gtattcctta	ctgggactgg	acaaaaccag	tcaacgagtt	acccgagctt	ctttcttcag	360
caacatttta	tcattccaatc	cggaaatatta	atattttcaa	tccattcctc	ggggctgaca	420
tagaatttga	aggaccgggc	gttcatacag	agaggcacat	aaatactgag	cgctgttttc	480
acagtgggga	tcattgacgga	taccacaact	ggttcttcga	aactgtttctc	tttgcctttg	540
aacaggaaga	ttactgcgat	tttgaaatca	aatttgagat	agcccataat	ggcatccaca	600
catggattgg	tggaaagcga	gtatatggca	tgggacacct	tcactatgca	tcatatgatc	660
caatttttcta	catccaccat	tcacagacgg	acagaatatg	ggctatttgg	caagagctgc	720

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agaagtacag gggctctatct gggttcggaag caaactgtgc cattgaacat atgagaacac 780
ccttgaagcc tttcagctttt gggccaccct acaatttgaa tagtcatacg caagaatatt 840
caaagcctga ggacacgttt gactataaga agtttgata cagatatgat agtctggaat 900
tggaggggag atcaatttct cgcattgatg aacttatcca gcagagacag gagaaagaca 960
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acatgaacct gaggcacgag gacactttct ctatagacgt aactatcacg tcttacaatg 1200
gaacagtact ctcgaggagac ctcatcaga cgcctccat tatatttgta cctggacgcc 1260

```

<210> 170

<211> 191

<212> DNA

<213> *Haliotis tuberculata*

<400> 170

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ctgatggtta tcaagctatt gctgccttcc atggcggtcc tgcgcagtgc cactgagccat 180
ctggacgtga g                                     191

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<210> 171

<211> 1060

<212> DNA

<213> *Haliotis tuberculata*

<400> 171

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cagttggagc aagcgctgcg cagacacggg tccagtgttg ctgttcata ctgggactgg 120
accaagccaa tcaccgaact gccacacatt ctgacagacg gagaatatta tgacgtttgg 180
caaaatgccg tcttgccaa tccgtttgca agaggttatg tgaaaattaa agatgcattt 240
acgggtgagaa atgtccagga aagtctgttc aaaatgtcaa gttttggaaa gcactcgctt 300
ctgtttgacc aggtttgtt ggctcttgaa caaactgact actgtgactt cgaagttcag 360
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tcctctctcg agtattcctc atacgatcca atcttcttta ttcaccactc gtttggtgac 480
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aactcgttca ccaagaagca cgcagtcctt aatacagtat ttgattatga agatcctggc 660
tataactatg acaaccttga aatcagtggg ttaaacttaa atgagatcga ggcgttaata 720
gcaaaacgca agtcacatgc tagagtcttt gctgggttcc tgttggtttg attaggaact 780
tcggctgata tacatctgga aatttgcaag acatcggaag actgccatga tgctgggtg 840
atcttcatcc ttggagggtc tgcagagatg cattgggcat acaaccgcct ctacaagtat 900
gacattacag aagcattgca ggaatttgac atcaaccctg aagatgtttt ccatgctgat 960
gaaccatttt tcctgaggct gtcggttggt gctgtgaatg gaactgtcat tccatcgtct 1020
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```

<210> 172

<211> 219

<212> DNA

<213> *Haliotis tuberculata*

<400> 172

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accacgggtc caatggcttt caagctattg ctgctttcca tggaaaacca gctttgtgtc 180
ccatgcctga tggccacaac tactcatggt gtactcacg                                     219

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<210> 173
 <211> 164
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 173
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 tgccaacact ggtcaccgac acggacaaca accccttcca acat 164

<210> 174
 <211> 826
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 174
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 acaggtggcc acagccccta cggaaatgtcc actctcgact tcaactgccta cgatcctctc 240
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 tacagaggac ttccatacaa ccatgccaat tgtgagatcc aggcaatgaa aacgcccctg 360
 aggcctttca gtgacgatat caaccacaac ccagtcacaa aggctaaccg gaagccatta 420
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 gaacacgaat gtgtgttcgc agggactttt gcgattttgg gaggggagct agaaatgcc 660
 tggctccttcg acagactggt ccgctatgat atcaccaagg tgatgaagca gctacacctg 720
 aggcagact ctgactttac cttcagggtg aagattgtcg gcaccgacga ccacgagctt 780
 ccttcagaca gtgtcaaagc accaactatt gaatttgaac cgggcg 826

<210> 175
 <211> 1535
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 175
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 tcaggaaaga agttgacttc ctctccctgc aagaagccaa cgcaattaag gatgcactgt 120
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 atcctaatat gtgtccagaa agaggtaccg acaagtatcc ctgctgtgtc cacggaatgc 240
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 aagttcagta tgagatcctc cataacgccg tccactcctg gcttggagga actggaaagt 600
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 actacaggtt caactatgaa tacgataaca tgagaatcag gggtcaggac atacatgaac 900
 ttgaagaggt aattcaggaa ttaagaaaca aagatcgcat atttgctggt tttgttttgt 960
 cgggcttacg gatatcagct acagtgaag tattcattca ttcgaaaaac gatacaagtc 1020
 acgaagaata tgcaggagaa tttgcagttt tgggaggtga gaaggagatg ccgtgggcat 1080
 atgaaagaat gctgaaattg gacatctccg atgctgtaca caagcttcac gtgaaagatg 1140
 aagacatccg ttttagagtg gttgttactg cctacaacgg tgacgttgtt accaccaggc 1200
 tgtctcagcc attcatcgtc caccgtccag ccatgtggc tcacgacatc ttggtaatcc 1260
 cagtaggtgc gggccatgac cttccgccta aagtcgtagt aaagagcggc accaaagtcg 1320
 agtttacacc aatagattcg tcggtgaaca aagcaatggg ggagctgggc agctatactg 1380
 ctatggctaa atgcatcggt cccctttct cttaccacgg ctttgaactg gacaaagtct 1440

acagcgtcga tcacggagac tactacattg ctgcaggtac ccacgcgttg tgtgagcaga 1500
acctcaggct ccacatccac gtggaacacg agtag 1535

<210> 176
<211> 7
<212> DNA
<213> *Haliotis tuberculata*

<400> 176
ttcacag 7

<210> 177
<211> 471
<212> DNA
<213> *Haliotis tuberculata*

<400> 177
gttgctatgc cgactgcgct atattggtga acgagacgat gaggacatct ctgaaagagt 60
tcgccaagtg atgtgtaggt cacggaagta ttgttgagct aacaatatga tgatttcaaa 120
atgacttggc gctctaggac aaagacataa ttcactcagca ccctgtgcac caactctttg 180
tttgctgcaa acgtctgaca agcgacacgt caatcaacaa gctgttcaaa ctcaagtgga 240
tgtaactaga atcgttgggc catcgttcac aaagtattga cagatgtcac acatgatggc 300
gagaaacact ttagaacttt taatgacctt gagtgacttg taaatatgta aatatattct 360
tcaaagactc agctgaacta ttgttgata acacatcaat tccctcaaca aaatgcttta 420
tcttcacatg gatgtatgta atgtggccgg caataaagta tatatatgta t 471

<210> 178
<211> 15
<212> PRT
<213> *Haliotis tuberculata*

<400> 178
Leu Val Gln Phe Leu Leu Val Ala Leu Val Val Gly Ala Gly Ala
1 5 10 15

<210> 179
<211> 407
<212> PRT
<213> *Haliotis tuberculata*

<400> 179
Asp Asn Val Val Arg Lys Asp Val Ser His Leu Thr Val Asp Glu Val
1 5 10 15

Gln Ala Leu His Gly Ala Leu His Asp Val Thr Ala Ser Thr Gly Pro
20 25 30

Leu Ser Phe Glu Asp Ile Thr Ser Tyr His Ala Ala Pro Ala Ser Cys
35 40 45

Asp Tyr Lys Gly Arg Lys Ile Ala Cys Cys Val His Gly Met Pro Ser
50 55 60

Phe Pro Phe Trp His Arg Ala Tyr Val Val Gln Ala Glu Arg Ala Leu
65 70 75 80

Leu Ser Lys Arg Lys Thr Val Gly Met Pro Tyr Trp Asp Trp Thr Gln
85 90 95

Thr Leu Thr His Leu Pro Ser Leu Val Thr Glu Pro Ile Tyr Ile Asp
 100 105 110
 Ser Lys Gly Gly Lys Ala Gln Thr Asn Tyr Trp Tyr Arg Gly Glu Ile
 115 120 125
 Ala Phe Ile Asn Lys Lys Thr Ala Arg Ala Val Asp Asp Arg Leu Phe
 130 135 140
 Glu Lys Val Glu Pro Gly His Tyr Thr His Leu Met Glu Thr Val Leu
 145 150 155 160
 Asp Ala Leu Glu Gln Asp Glu Phe Cys Lys Phe Glu Ile Gln Phe Glu
 165 170 175
 Leu Ala His Asn Ala Ile His Tyr Leu Val Gly Gly Lys Phe Glu Tyr
 180 185 190
 Ser Met Ser Asn Leu Glu Tyr Thr Ser Tyr Asp Pro Ile Phe Phe Leu
 195 200 205
 His His Ser Asn Val Asp Arg Leu Phe Ala Ile Trp Gln Arg Leu Gln
 210 215 220
 Glu Leu Arg Gly Lys Asn Pro Asn Ala Met Asp Cys Ala His Glu Leu
 225 230 235 240
 Ala His Gln Gln Leu Gln Pro Phe Asn Arg Asp Ser Asn Pro Val Gln
 245 250 255
 Leu Thr Lys Asp His Ser Thr Pro Ala Asp Leu Phe Asp Tyr Lys Gln
 260 265 270
 Leu Gly Tyr Ser Tyr Asp Ser Leu Asn Leu Asn Gly Met Thr Pro Glu
 275 280 285
 Gln Leu Lys Thr Glu Leu Asp Glu Arg His Ser Lys Glu Arg Ala Phe
 290 295 300
 Ala Ser Phe Arg Leu Ser Gly Phe Gly Gly Ser Ala Asn Val Val Val
 305 310 315 320
 Tyr Ala Cys Val Pro Asp Asp Asp Pro Arg Ser Asp Asp Tyr Cys Glu
 325 330 335
 Lys Ala Gly Asp Phe Phe Ile Leu Gly Gly Gln Ser Glu Met Pro Trp
 340 345 350
 Arg Phe Tyr Arg Pro Phe Phe Tyr Asp Val Thr Glu Ala Val His His
 355 360 365
 Leu Gly Val Pro Leu Ser Gly His Tyr Tyr Val Lys Thr Glu Leu Phe
 370 375 380
 Ser Val Asn Gly Thr Ala Leu Ser Pro Asp Leu Leu Pro Gln Pro Thr
 385 390 395 400
 Val Ala Tyr Arg Pro Gly Lys
 405

<210> 180
 <211> 419
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 180
 Gly His Leu Asp Pro Pro Val His His Arg His Asp Asp Asp Leu Ile
 1 5 10 15
 Val Arg Lys Asn Ile Asp His Leu Thr Arg Glu Glu Glu Tyr Glu Leu
 20 25 30
 Arg Met Ala Leu Glu Arg Phe Gln Ala Asp Thr Ser Val Asp Gly Tyr
 35 40 45
 Gln Ala Thr Val Glu Tyr His Gly Leu Pro Ala Arg Cys Pro Arg Pro
 50 55 60
 Asp Ala Lys Val Arg Phe Ala Cys Cys Met His Gly Met Ala Ser Phe
 65 70 75 80
 Pro His Trp His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Val
 85 90 95
 Arg Arg Gly Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Lys Pro
 100 105 110
 Met Thr His Leu Pro Asp Leu Ala Ser Asn Glu Thr Tyr Val Asp Pro
 115 120 125
 Tyr Gly His Thr His His Asn Pro Phe Phe Asn Ala Asn Ile Ser Phe
 130 135 140
 Glu Glu Gly His His His Thr Ser Arg Met Ile Asp Ser Lys Leu Phe
 145 150 155 160
 Ala Pro Val Ala Phe Gly Glu His Ser His Leu Phe Asp Gly Ile Leu
 165 170 175
 Tyr Ala Phe Glu Gln Glu Asp Phe Cys Asp Phe Glu Ile Gln Phe Glu
 180 185 190
 Leu Val His Asn Ser Ile His Ala Trp Ile Gly Gly Ser Glu Asp Tyr
 195 200 205
 Ser Met Ala Thr Leu His Tyr Thr Ala Phe Asp Pro Ile Phe Tyr Leu
 210 215 220
 His His Ser Asn Val Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln
 225 230 235 240
 Ile Arg Arg His Lys Pro Tyr Gln Ala His Cys Ala Gln Ser Val Glu
 245 250 255
 Gln Leu Pro Met Lys Pro Phe Ala Phe Pro Ser Pro Leu Asn Asn Asn
 260 265 270
 Glu Lys Thr His Ser His Ser Val Pro Thr Asp Ile Tyr Asp Tyr Glu
 275 280 285

Glu Val Leu His Tyr Ser Tyr Asp Asp Leu Thr Phe Gly Gly Met Asn
 290 295 300

Leu Glu Glu Ile Glu Glu Ala Ile His Leu Arg Gln Gln His Glu Arg
 305 310 315 320

Val Phe Ala Gly Phe Leu Leu Ala Gly Ile Gly Thr Ser Ala Leu Val
 325 330 335

Asp Ile Phe Ile Asn Lys Pro Gly Asn Gln Pro Leu Lys Ala Gly Asp
 340 345 350

Ile Ala Ile Leu Gly Gly Ala Lys Glu Met Pro Trp Ala Phe Asp Arg
 355 360 365

Leu Tyr Lys Val Glu Ile Thr Asp Ser Leu Lys Thr Leu Ser Leu Asp
 370 375 380

Val Asp Gly Asp Tyr Glu Val Thr Phe Lys Ile His Asp Met His Gly
 385 390 395 400

Asn Ala Leu Asp Thr Asp Leu Ile Pro His Ala Ala Val Val Ser Glu
 405 410 415

Pro Ala His

<210> 181

<211> 414

<212> PRT

<213> *Haliotis tuberculata*

<400> 181

Pro Thr Phe Glu Asp Glu Lys His Ser Leu Arg Ile Arg Lys Asn Val
 1 5 10 15

Asp Ser Leu Thr Pro Glu Glu Thr Asn Glu Leu Arg Lys Ala Leu Glu
 20 25 30

Leu Leu Glu Asn Asp His Thr Ala Gly Gly Phe Asn Gln Leu Gly Ala
 35 40 45

Phe His Gly Glu Pro Lys Trp Cys Pro Asn Pro Glu Ala Glu His Lys
 50 55 60

Val Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80

Leu Leu Ala Leu Gln Ala Glu Asn Ala Leu Arg Lys His Gly Tyr Ser
 85 90 95

Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser Gln Leu Pro
 100 105 110

Asp Leu Val Ser His Glu Gln Tyr Thr Asp Pro Ser Asp His His Val
 115 120 125

Lys His Asn Pro Trp Phe Asn Gly His Ile Asp Thr Val Asn Gln Asp
 130 135 140

Thr Thr Arg Ser Val Arg Glu Asp Leu Tyr Gln Gln Pro Glu Phe Gly
 145 150 155 160
 His Phe Thr Asp Ile Ala Gln Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175
 Asp Phe Cys Ser Phe Glu Val Gln Tyr Glu Ile Ser His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Thr Asp Ala Tyr Gly Met Ala Ser Leu Arg
 195 200 205
 Tyr Thr Ala Tyr Asp Pro Ile Phe Phe Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ser Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Thr Ala Asn Cys Ala Ile Glu Ser Met Arg Arg Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Ser Ser Ala Ile Asn Pro Asp Arg Ile Thr Arg Glu
 260 265 270
 His Ala Ile Pro Phe Asp Val Phe Asn Tyr Arg Asp Asn Leu His Tyr
 275 280 285
 Val Tyr Asp Thr Leu Glu Phe Asn Gly Leu Ser Ile Ser Gln Leu Asp
 290 295 300
 Arg Glu Leu Glu Lys Ile Lys Ser His Glu Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu Ser Gly Ile Lys Lys Ser Ala Leu Val Lys Phe Glu Val Cys
 325 330 335
 Thr Pro Pro Asp Asn Cys His Lys Ala Gly Glu Phe Tyr Leu Leu Gly
 340 345 350
 Asp Glu Asn Glu Met Ala Trp Ala Tyr Asp Arg Leu Phe Lys Tyr Asp
 355 360 365
 Ile Thr Gln Val Leu Glu Ala Asn His Leu His Phe Tyr Asp His Leu
 370 375 380
 Phe Ile Arg Tyr Glu Val Phe Asp Leu Lys Gly Val Ser Leu Gly Thr
 385 390 395 400
 Asp Leu Phe His Thr Ala Asn Val Val His Asp Ser Gly Thr
 405 410

<210> 182
 <211> 413
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 182
 Gly Thr Arg Asp Arg Asp Asn Tyr Val Glu Glu Val Thr Gly Ala Ser
 1 5 10 15

His Ile Arg Lys Asn Leu Asn Asp Leu Asn Thr Gly Glu Met Glu Ser
 20 25 30
 Leu Arg Ala Ala Phe Leu His Ile Gln Asp Asp Gly Thr Tyr Glu Ser
 35 40 45
 Ile Ala Gln Tyr His Gly Lys Pro Gly Lys Cys Gln Leu Asn Asp His
 50 55 60
 Asn Ile Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
 65 70 75 80
 Arg Leu Tyr Val Val Gln Val Glu Asn Ala Leu Leu Asn Arg Gly Ser
 85 90 95
 Gly Val Ala Val Pro Tyr Trp Glu Trp Thr Ala Pro Ile Asp His Leu
 100 105 110
 Pro His Phe Ile Asp Asp Ala Thr Tyr Phe Asn Ser Arg Gln Gln Arg
 115 120 125
 Tyr Asp Pro Asn Pro Phe Phe Arg Gly Lys Val Thr Phe Glu Asn Ala
 130 135 140
 Val Thr Thr Arg Asp Pro Gln Ala Gly Leu Phe Asn Ser Asp Tyr Met
 145 150 155 160
 Tyr Glu Asn Val Leu Leu Ala Leu Glu Gln Glu Asn Tyr Cys Asp Phe
 165 170 175
 Glu Ile Gln Phe Glu Leu Val His Asn Ala Leu His Ser Met Leu Gly
 180 185 190
 Gly Lys Gly Gln Tyr Ser Met Ser Ser Leu Asp Tyr Ser Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
 210 215 220
 Trp Gln Glu Leu Gln Arg Phe Arg Glu Leu Pro Tyr Glu Glu Ala Asn
 225 230 235 240
 Cys Ala Ile Asn Leu Met His Gln Pro Leu Lys Pro Phe Ser Asp Pro
 245 250 255
 His Glu Asn His Asp Asn Val Thr Leu Lys Tyr Ser Lys Pro Gln Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn His Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe His His Leu Ser Ile Pro Ser Leu Asp Ala Thr Leu Lys Gln Arg
 290 295 300
 Arg Asn His Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Asp Ile Thr Ile Tyr Ile Cys Leu Pro Asp Gly Arg Arg
 325 330 335

Gly Asn Asp Cys Ser His Glu Ala Gly Thr Phe Tyr Ile Leu Gly Gly
 340 345 350

Glu Thr Glu Met Pro Phe Ile Phe Asp Arg Leu Tyr Lys Phe Glu Ile
 355 360 365

Thr Lys Pro Leu Gln Gln Leu Gly Val Lys Leu His Gly Gly Val Phe
 370 375 380

Glu Leu Glu Leu Glu Ile Lys Ala Tyr Asn Gly Ser Tyr Leu Asp Pro
 385 390 395 400

His Thr Phe Asp Pro Thr Ile Ile Phe Glu Pro Gly Thr
 405 410

<210> 183

<211> 420

<212> PRT

<213> *Haliotis tuberculata*

<400> 183

Asp Thr His Ile Leu Asp His Asp His Glu Glu Glu Ile Leu Val Arg
 1 5 10 15

Lys Asn Ile Ile Asp Leu Ser Pro Arg Glu Arg Val Ser Leu Val Lys
 20 25 30

Ala Leu Gln Arg Met Lys Asn Asp Arg Ser Ala Asp Gly Tyr Gln Ala
 35 40 45

Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Asn Pro Ser Ala
 50 55 60

Ala His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln
 65 70 75 80

Trp His Arg Leu Tyr Thr Val Gln Val Gln Asp Ala Leu Arg Arg His
 85 90 95

Gly Ser Leu Val Gly Ile Pro Tyr Trp Asp Trp Thr Lys Pro Val Asn
 100 105 110

Glu Leu Pro Glu Leu Leu Ser Ser Ala Thr Phe Tyr His Pro Ile Arg
 115 120 125

Asn Ile Asn Ile Ser Asn Pro Phe Leu Gly Ala Asp Ile Glu Phe Glu
 130 135 140

Gly Pro Gly Val His Thr Glu Arg His Ile Asn Thr Glu Arg Leu Phe
 145 150 155 160

His Ser Gly Asp His Asp Gly Tyr His Asn Trp Phe Phe Glu Thr Val
 165 170 175

Leu Phe Ala Leu Glu Gln Glu Asp Tyr Cys Asp Phe Glu Ile Gln Phe
 180 185 190

Glu Ile Ala His Asn Gly Ile His Thr Trp Ile Gly Gly Ser Ala Val
 195 200 205

Tyr Gly Met Gly His Leu His Tyr Ala Ser Tyr Asp Pro Ile Phe Tyr
 210 215 220
 Ile His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu
 225 230 235 240
 Gln Lys Tyr Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Ile Glu
 245 250 255
 His Met Arg Thr Pro Leu Lys Pro Phe Ser Phe Gly Pro Pro Tyr Asn
 260 265 270
 Leu Asn Ser His Thr Gln Glu Tyr Ser Lys Pro Glu Asp Thr Phe Asp
 275 280 285
 Tyr Lys Lys Phe Gly Tyr Arg Tyr Asp Ser Leu Glu Leu Glu Gly Arg
 290 295 300
 Ser Ile Ser Arg Ile Asp Glu Leu Ile Gln Gln Arg Gln Glu Lys Asp
 305 310 315 320
 Arg Thr Phe Ala Gly Phe Leu Leu Lys Gly Phe Gly Thr Ser Ala Ser
 325 330 335
 Val Ser Leu Gln Val Cys Arg Val Asp His Thr Cys Lys Asp Ala Gly
 340 345 350
 Tyr Phe Thr Ile Leu Gly Gly Ser Ala Glu Met Pro Trp Ala Phe Asp
 355 360 365
 Arg Leu Tyr Lys Tyr Asp Ile Thr Lys Thr Leu His Asp Met Asn Leu
 370 375 380
 Arg His Glu Asp Thr Phe Ser Ile Asp Val Thr Ile Thr Ser Tyr Asn
 385 390 395 400
 Gly Thr Val Leu Ser Gly Asp Leu Ile Gln Thr Pro Ser Ile Ile Phe
 405 410 415
 Val Pro Gly Arg
 420

<210> 184

<211> 417

<212> PRT

<213> *Haliotis tuberculata*

<400> 184

His Lys Leu Asn Ser Arg Lys His Thr Pro Asn Arg Val Arg His Glu
 1 5 10 15
 Leu Ser Ser Leu Ser Ser Arg Asp Ile Ala Ser Leu Lys Ala Ala Leu
 20 25 30
 Thr Ser Leu Gln His Asp Asn Gly Thr Asp Gly Tyr Gln Ala Ile Ala
 35 40 45
 Ala Phe His Gly Val Pro Ala Gln Cys His Glu Pro Ser Gly Arg Glu
 50 55 60

Ile Ala Cys Cys Ile His Gly Met Ala Thr Phe Pro His Trp His Arg
 65 70 75 80
 Leu Tyr Thr Leu Gln Leu Glu Gln Ala Leu Arg Arg His Gly Ser Ser
 85 90 95
 Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Pro Ile Thr Glu Leu Pro
 100 105 110
 His Ile Leu Thr Asp Gly Glu Tyr Tyr Asp Val Trp Gln Asn Ala Val
 115 120 125
 Leu Ala Asn Pro Phe Ala Arg Gly Tyr Val Lys Ile Lys Asp Ala Phe
 130 135 140
 Thr Val Arg Asn Val Gln Glu Ser Leu Phe Lys Met Ser Ser Phe Gly
 145 150 155 160
 Lys His Ser Leu Leu Phe Asp Gln Ala Leu Leu Ala Leu Glu Gln Thr
 165 170 175
 Asp Tyr Cys Asp Phe Glu Val Gln Phe Glu Val Met His Asn Thr Ile
 180 185 190
 His Tyr Leu Val Gly Gly Arg Gln Thr Tyr Ala Phe Ser Ser Leu Glu
 195 200 205
 Tyr Ser Ser Tyr Asp Pro Ile Phe Phe Ile His His Ser Phe Val Asp
 210 215 220
 Lys Ile Trp Ala Val Trp Gln Glu Leu Gln Ser Arg Arg His Leu Gln
 225 230 235 240
 Phe Arg Thr Ala Asp Cys Ala Val Gly Leu Met Gly Gln Ala Met Arg
 245 250 255
 Pro Phe Asn Lys Asp Phe Asn His Asn Ser Phe Thr Lys Lys His Ala
 260 265 270
 Val Pro Asn Thr Val Phe Asp Tyr Glu Asp Leu Gly Tyr Asn Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ser Gly Leu Asn Leu Asn Glu Ile Glu Ala Leu Ile
 290 295 300
 Ala Lys Arg Lys Ser His Ala Arg Val Phe Ala Gly Phe Leu Leu Phe
 305 310 315 320
 Gly Leu Gly Thr Ser Ala Asp Ile His Leu Glu Ile Cys Lys Thr Ser
 325 330 335
 Glu Asn Cys His Asp Ala Gly Val Ile Phe Ile Leu Gly Gly Ser Ala
 340 345 350
 Glu Met His Trp Ala Tyr Asn Arg Leu Tyr Lys Tyr Asp Ile Thr Glu
 355 360 365
 Ala Leu Gln Glu Phe Asp Ile Asn Pro Glu Asp Val Phe His Ala Asp
 370 375 380

Glu Pro Phe Phe Leu Arg Leu Ser Val Val Ala Val Asn Gly Thr Val
 385 390 395 400

Ile Pro Ser Ser His Leu His Gln Pro Thr Ile Ile Tyr Glu Pro Gly
 405 410 415

Glu

<210> 185
 <211> 403
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 185
 Asp His His Asp Asp His Gln Ser Gly Ser Ile Ala Gly Ser Gly Val
 1 5 10 15

Arg Lys Asp Val Asn Thr Leu Thr Lys Ala Glu Thr Asp Asn Leu Arg
 20 25 30

Glu Ala Leu Trp Gly Val Met Ala Asp His Gly Pro Asn Gly Phe Gln
 35 40 45

Ala Ile Ala Ala Phe His Gly Lys Pro Ala Leu Cys Pro Met Pro Asp
 50 55 60

Gly His Asn Tyr Ser Cys Cys Thr His Gly Met Ala Thr Phe Pro His
 65 70 75 80

Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Met Arg Ala His
 85 90 95

Gly Ser His Val Gly Leu Pro Tyr Trp Asp Trp Thr Ala Ala Phe Thr
 100 105 110

His Leu Pro Thr Leu Val Thr Asp Thr Asp Asn Asn Pro Phe Gln His
 115 120 125

Gly His Ile Asp Tyr Leu Asn Val Ser Thr Thr Arg Ser Pro Arg Asp
 130 135 140

Met Leu Phe Asn Asp Pro Glu His Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160

Gln Val Leu Leu Ala Leu Glu Gln Thr Asp Phe Cys Lys Phe Glu Val
 165 170 175

Gln Phe Glu Ile Thr His Asn Ala Ile His Ser Trp Thr Gly Gly His
 180 185 190

Ser Pro Tyr Gly Met Ser Thr Leu Asp Phe Thr Ala Tyr Asp Pro Leu
 195 200 205

Phe Trp Leu His His Ser Asn Thr Asp Arg Ile Trp Ala Val Trp Gln
 210 215 220

Ala Leu Gln Glu Tyr Arg Gly Leu Pro Tyr Asn His Ala Asn Cys Glu
 225 230 235 240

Ile Gln Ala Met Lys Thr Pro Leu Arg Pro Phe Ser Asp Asp Ile Asn
245 250 255

His Asn Pro Val Thr Lys Ala Asn Ala Lys Pro Leu Asp Val Phe Glu
260 265 270

Tyr Asn Arg Leu Ser Phe Gln Tyr Asp Asn Leu Ile Phe His Gly Tyr
275 280 285

Ser Ile Pro Glu Leu Asp Arg Val Leu Glu Glu Arg Lys Glu Glu Asp
290 295 300

Arg Ile Phe Ala Ala Phe Leu Leu Ser Gly Ile Lys Arg Ser Ala Asp
305 310 315 320

Val Val Phe Asp Ile Cys Gln Pro Glu His Glu Cys Val Phe Ala Gly
325 330 335

Thr Phe Ala Ile Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
340 345 350

Arg Leu Phe Arg Tyr Asp Ile Thr Lys Val Met Lys Gln Leu His Leu
355 360 365

Arg His Asp Ser Asp Phe Thr Phe Arg Val Lys Ile Val Gly Thr Asp
370 375 380

Asp His Glu Leu Pro Ser Asp Ser Val Lys Ala Pro Thr Ile Glu Phe
385 390 395 400

Glu Pro Gly

<210> 186

<211> 511

<212> PRT

<213> Haliotis tuberculata

<400> 186

Val His Arg Gly Gly Asn His Glu Asp Glu His His Asp Asp Arg Leu
1 5 10 15

Ala Asp Val Leu Ile Arg Lys Glu Val Asp Phe Leu Ser Leu Gln Glu
20 25 30

Ala Asn Ala Ile Lys Asp Ala Leu Tyr Lys Leu Gln Asn Asp Asp Ser
35 40 45

Lys Gly Gly Phe Glu Ala Ile Ala Gly Tyr His Gly Tyr Pro Asn Met
50 55 60

Cys Pro Glu Arg Gly Thr Asp Lys Tyr Pro Cys Cys Val His Gly Met
65 70 75 80

Pro Val Phe Pro His Trp His Arg Leu His Thr Ile Gln Met Glu Arg
85 90 95

Ala Leu Lys Asn His Gly Ser Pro Met Gly Ile Pro Tyr Trp Asp Trp
100 105 110

Thr Lys Lys Met Ser Ser Leu Pro Ser Phe Phe Gly Asp Ser Ser Asn
 115 120 125
 Asn Asn Pro Phe Tyr Lys Tyr Tyr Ile Arg Gly Val Gln His Glu Thr
 130 135 140
 Thr Arg Asp Ile Asn Gln Arg Leu Phe Asn Gln Thr Lys Phe Gly Glu
 145 150 155 160
 Phe Asp Tyr Leu Tyr Tyr Leu Thr Leu Gln Val Leu Glu Glu Asn Ser
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn Ala Val His
 180 185 190
 Ser Trp Leu Gly Gly Thr Gly Lys Tyr Ser Met Ser Thr Leu Glu His
 195 200 205
 Ser Ala Phe Asp Pro Val Phe Met Ile His His Ser Ser Leu Asp Arg
 210 215 220
 Ile Trp Ile Leu Trp Gln Lys Leu Gln Lys Ile Arg Met Lys Pro Tyr
 225 230 235 240
 Tyr Ala Leu Asp Cys Ala Gly Asp Arg Leu Met Lys Asp Pro Leu His
 245 250 255
 Pro Phe Asn Tyr Glu Thr Val Asn Glu Asp Glu Phe Thr Arg Ile Asn
 260 265 270
 Ser Phe Pro Ser Ile Leu Phe Asp His Tyr Arg Phe Asn Tyr Glu Tyr
 275 280 285
 Asp Asn Met Arg Ile Arg Gly Gln Asp Ile His Glu Leu Glu Glu Val
 290 295 300
 Ile Gln Glu Leu Arg Asn Lys Asp Arg Ile Phe Ala Gly Phe Val Leu
 305 310 315 320
 Ser Gly Leu Arg Ile Ser Ala Thr Val Lys Val Phe Ile His Ser Lys
 325 330 335
 Asn Asp Thr Ser His Glu Glu Tyr Ala Gly Glu Phe Ala Val Leu Gly
 340 345 350
 Gly Glu Lys Glu Met Pro Trp Ala Tyr Glu Arg Met Leu Lys Leu Asp
 355 360 365
 Ile Ser Asp Ala Val His Lys Leu His Val Lys Asp Glu Asp Ile Arg
 370 375 380
 Phe Arg Val Val Val Thr Ala Tyr Asn Gly Asp Val Val Thr Thr Arg
 385 390 395 400
 Leu Ser Gln Pro Phe Ile Val His Arg Pro Ala His Val Ala His Asp
 405 410 415
 Ile Leu Val Ile Pro Val Gly Ala Gly His Asp Leu Pro Pro Lys Val
 420 425 430

Val Val Lys Ser Gly Thr Lys Val Glu Phe Thr Pro Ile Asp Ser Ser
435 440 445

Val Asn Lys Ala Met Val Glu Leu Gly Ser Tyr Thr Ala Met Ala Lys
450 455 460

Cys Ile Val Pro Pro Phe Ser Tyr His Gly Phe Glu Leu Asp Lys Val
465 470 475 480

Tyr Ser Val Asp His Gly Asp Tyr Tyr Ile Ala Ala Gly Thr His Ala
485 490 495

Leu Cys Glu Gln Asn Leu Arg Leu His Ile His Val Glu His Glu
500 505 510

<210> 187
<211> 90
<212> DNA
<213> *Haliotis tuberculata*

<400> 187
ggtcttccgt actgggactg gacgcagcat ctgactcaac tcccagatct ggtgtcagac 60
cccttgtttg tcgacccgga aggaggaaag 90

<210> 188
<211> 221
<212> DNA
<213> *Haliotis tuberculata*

<400> 188
gcccatgaca acgcatggta tcgtggaaac atcaagtttg agaataagaa gactgcaaga 60
gctgttgacg atcgcccttt cgagaagggt ggaccaggag agaatacccg actctttgaa 120
ggaattctcg atgctcttga acaggatgaa ttctgcaact tcgagatcca gtttgagttg 180
gctcacaacg ctatccacta cctgggtggc ggccgtcaca c 221

<210> 189
<211> 255
<212> DNA
<213> *Haliotis tuberculata*

<400> 189
gtactccatg tctcatctcg agtacacctc ctacgacccc ctcttcttcc tccatcactc 60
caacaccgac cgcactctcg ccatctggca acgtcttcag gtactcagag gaaaggaccc 120
caacaccgcc gactgcgcac acaacctcat ccatgagccc atggaaccgt tccgtcggga 180
ctcgaaccct cttgacctca ccagggaaaa ctccaaacca attgacagct ttgattatgc 240
ccaccttggc tacca 255

<210> 190
<211> 407
<212> DNA
<213> *Haliotis tuberculata*

<400> 190
gtatgatgac ttgaccctga acggtatgac cccagaggaa ttgaactcat atctgcatga 60
acggtcaggc aaggaggggg tgctcgcaag cttccgactc tcagggtttg gcggctctgc 120
taacgttggt gtctacgcat gccgtcctgc ccacgatgaa atggctgtcg atcagtgcga 180
caaagccggc gacttctttg tggtgggcgg acccaccgag atgccctgga ggttttacag 240
agcattccac ttcgacgtca ccgacagcat cgacaacatc gacaaggacc gccacggcca 300
ctattatgta aaggcggaat tattcagtgt aaatggaagt gcgctaccga atgatctcct 360
gcctcaaccc accatctcac acaggccagc ccgcggacac gttgatg 407

<210> 191
 <211> 1239
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 191
 agggcccccagc tccctcctcg gatgctcacc tcgccgtcag gaaggatata aaccatctga 60
 cacgcgagga ggtgtacgag ctgcgcagag ctatggagag attccaggcc gacacatccg 120
 ttgatgggta ccaggctacg gttgagtata acggcttacc tgctcgatgt ccattccccg 180
 agggcacaaa taggttcgcc tgttgcatcc acggcatggc gacattccct cattggcaca 240
 gactgttcgt taccaggtg gaagatgcac tgatcaggcg aggatcccct ataggggtcc 300
 cctactggga ctggactcag cctatggcac atctcccagg acttgcagac aacgccacct 360
 atagagatcc catcagcggg gacagcagac acaaccggtt ccacgatgtt gaagttgcct 420
 ttgaaaatgg gcgtacagaa cgtcacccag atagtagatt gtttgaacaa cctctatttg 480
 gcaaacatac gcgtctcttc gacagtatac tctatgcttt tgagcaggag gacttctgctg 540
 attttgaagt tcaatttgag atgaccatac ataatttca cgcctggatt ggtggcgggc 600
 ggaagtattc catgtcttct ctacactaca cagccttcga ccctatctcc taccttcac 660
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 cgtataaggc tcattgtgct tgggtctgag aacgccagcc tctcaaacct ttcgccttca 780
 gttccccact gaacaacaac gaaaaaacct acgaaaactc ggtgccacc aacgtttacg 840
 actacgaagg agtccttggc tatacttatg atgacctcaa cttcgggggc atggacctgg 900
 gtcagcttga ggaatacatc cagaggcaga gacagagaga caggaccttt gctggcttct 960
 ttctgtcaca tattggtaca tcagcgaatg ttgaaatcat tatagaccat gggactcttc 1020
 atacctccgt gggcacgttt gctgttcttg gcggagagaa ggagatgaaa tggggatttg 1080
 accgtttgta caaatatgag attacagatg aactgaggca acttaatctc cgtgctgatg 1140
 atggtttcag catctctgtt aaagtaactg atgttgatgg cagtgaagctg tcctctgaac 1200
 tcatcccatc tgctgctatc atcttcgaac gaagccata 1239

<210> 192
 <211> 1245
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 192
 ttgaccatca ggaccctcat caggacacaa tcatcaggaa aaatgttgat aatcttacac 60
 ccgaggaaat taattctctg aggagggcaa tggcagacct tcaatcagac aaaaccgccg 120
 gtggattcca gcaaattgct gcttttcacg gggaacccaa atggtgccc aatccccgatg 180
 ctgagaagaa gttctcctgc tgtgtccatg gaatggctgt cttccctcac tggcacagac 240
 tcttgaccgt gcaaggcgag aatgccctga gaaagcatgg atgtctcgga gctctccct 300
 actgggactg gactcgccc ctgtctcacc tacctgattt ggtaagtcag cagaactaca 360
 ccgatgccat atccaccgtg gaagcccga acccctggta cagcggccat attgatacag 420
 ttggtgttga cacaacaaga agcgtccgtc aagaactgta tgaagctccc ggatttggtc 480
 attatactgg ggtcgtaag caagtgttc tggctttgga gcaggatgac ttctgtgatt 540
 ttgaagtcca gtttgagata gtcacaatt tcatccacgc tcttgctggc ggaagcgagc 600
 catatggtat ggcgtcactc cgttacacta cttatgatcc aattttctac ctccatcatt 660
 ctaacactga cagactctgg gctatatggc aggtcttaca aaagtacagg ggcaaacctt 720
 acaattccgc caactgtgcc attgcttcta tgagaaaacc cctacagccc tttggtctga 780
 ctgatgagat caaccggat gatgagacaa gacagcatgc tgttcctttc agtgtctttg 840
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 cccagctgga ccgtgaactg tcacggagaa agtctcatga cagagtattt gccggatttt 960
 tgctgcatgg tattcagcag tctgcactag ttaattctt tgtctgcaaa tcagatgatg 1020
 actgtgacca ctatgctggt gaattctaca tccttggtga tgaagctgaa atgccatggg 1080
 gctatgatcg tctttacaaa tatgagatca ctgagcagct caatgccctg gatctacaca 1140
 tcggagatag attcttcac agatacgaag cgtttgatct tcatggtaca agtcttgga 1200
 gcaacatctt ccccaaacct tctgtcatatc atgacgaagg ggcag 1245

<210> 193
 <211> 1242
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 193
 gtcacccatca ggctgacgag tacgacgaag ttgtaactgc tgcaagccac atcagaaaaga 60
 atttaaaaga tctgtcaaaag ggagaagtag agagcctaag gtctgccttc ctgcaacttc 120
 agaacgacgg agtctatgag aatattgcca aattccacgg caagcctggg ttgtgtgatg 180
 ataacggctg caaggttgcc tgttgtgtcc atggaatgcc caccttcccc cagtggcaca 240
 gactctatgt cctccagggtg gagaatgctt tgctggagag aggatctgcc gtctctgtgc 300
 catactggga ctggactgaa acatttacag agctgccatc tttgattgct gaggctacct 360
 atttcaattc ccgtcaacaa acgtttgacc ctaatccttt cttcagaggt aaaatcagtt 420
 ttgagaatgc tgttacaaca cgtgatcccc agcctgagct gtacgttaac aggtactact 480
 accaaaacgt catgttggct tttgaacagg acaactactg cgacttcgag atacagtttg 540
 agatggttca caatgttctc catgcttggc ttggtggaag agctacttat tctatttctt 600
 ctcttgatta ttctgcattc gaccctgtgt ttttccctca ccatgcgaac acagatagat 660
 tgtggggccat ctggcaggag ctgcagaggt acaggaagaa gccatacaat gaagcggatt 720
 gtgccattaa cctaatagcgc aaacctctac atcccttcga caacagtgat ctcaatcatg 780
 atcctgtaac ctttaaatac tcaaaaccca ctgatggctt tgactaccag aacaactttg 840
 gatacaagta tgacaacctt gagttcaatc atttccagtat tcccaggctt gaagaaatca 900
 ttctgtattag acaacgtcaa gatcgtgtgt ttgcaggatt cctccttcac aacattggga 960
 catccgcaac tgttgagata ttctgtctgtg tccctaccac cagcggtgag caaaactgtg 1020
 aaaacaaagc cggaaacattt gccgtactcg gaggagaaac agagatggcg tttcattttg 1080
 acagactcta caggttttgac atcagtgaac cactgaggga cctcggcata cagctggaca 1140
 gccatgactt tgacctcagc atcaagattc aaggagtaaa tggatcctac cttgatccac 1200
 acatcctgcc agagccatcc ttgatttttg tgccctgggtc aa 1242

<210> 194
 <211> 1257
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 194
 gttcttttct gcgtcctgat gggcattcag atgacatcct tgtgagaaaa gaagtgaaca 60
 gectgacaac cagggagagc gcatctctga tccatgctct gaaaagtatg caggaagacc 120
 attcacctga tgggttccaa gccattgcct ctttccatgc cctgccacca ctctgccctt 180
 caccatctgc aactcacctg tatgcttgct gtgtccacgg catggctaca tttccccagt 240
 ggcacagact gtacactgta cagttccagg atgcactgag gagacatgga gctgcagtag 300
 gtgtaccgta ttgggatttg ctgcgaccgc agtctcacct accagagctt gtcacccatg 360
 agacatacca tgatatattg agtaacagag atttcccca tctttctac caagccaata 420
 ttgagtttga aggagaaaac attacaacag agagagaagt cattgcagac aaactttttg 480
 tcaaagggtg acacgttttt gataactggg tcttcaaaca agccatccta gcgcttgagc 540
 agggaaaacta ctgtgacttt gagattcagt ttgaaattct tcacaacggc gttcacacgt 600
 gggctcgagg cagtcgtacc cactctatcg gacatctcca ttacgcatcc tacgacctc 660
 ttttctacct ccaccattcc cagacagacc gtatttgggc aatctggcaa gaactccagg 720
 aacagagagg gctctcaggt gatgaggctc actgtgctct cgagcaaatg agagaaccat 780
 tgaagccttt cagcttcggc gctccttata acttgaatca gctaacacag gatttctccc 840
 gacccgagga caccttcgac tacaggaagt ttggttatga atatgacaat ttagaattcc 900
 taggaatgtc agttgctgaa ctggatcaat acattattga acatcaagaa aatgatagag 960
 tattecgtgg gttcctgttg agtggattcg gaggttccgc atcagttaat ttccagggtt 1020
 gtagagctga ttccacatgt caggatgctg ggtacttcac cgttcttggt ggcagtgtg 1080
 agatggcgtg ggcatttgac aggtatatac aatatgacat tactgaaact ctggagaaaa 1140
 tgcaccttcg atatgatgat gacttcacaa tctctgtcag tctgaccgcc aacaacggaa 1200
 ctgtcctgag cagcagtcta atcccaacac cgagtgtcat attccagcgg ggacatc 1257

<210> 195

<211> 191

<212> DNA

<213> *Haliotis tuberculata*

<400> 195

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gtgacataaa taccaagagc atgtcagcga accgtgttcg ccgtgagctg agcgatctgt 60
ctgcgaggga cccgtctagt ctcaagtctg ctctgcgaga cctacaggag gatgatggcc 120
ccaacggata ccaggctctt gcagccttcc atgggctacc agcaggctgc catgatagcc 180
agggaaatga g                                     191
```

<210> 196

<211> 1057

<212> DNA

<213> *Haliotis tuberculata*

<400> 196

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cagttggaga tggctctgag gagacatgga tcatctgtcg ccatccccta ctgggactgg 120
acaaagccta tctccgaact cccctcgctc ttccaccagcc ctgagtatta tgacccatgg 180
catgatgctg tggtaaaca cccattctcc aaagggtttg tcaaatttgc aaataacctac 240
acagtaagag acccacagga gatgctgttc cagctttgtg aacatggaga gtcaatcctc 300
tatgagcaaa ctcttcttgc tctagagcaa accgactact gtgattttga ggtacagttt 360
gaggtcctcc ataacgtgat ccactacctt gttggcggac gtcagaccta cgcattgtct 420
tctctgcatt atgcatacta cgacccattc ttctttatac accattcctt tgtggataag 480
atgtgggtag tatggcaagc tcttcaaaag aggaggaaac ttccatacaa gcgagctgac 540
tgtgctgtca acctaatac taaaccaatg aggccatttg actccgatat gaatcagaac 600
ccattcacaa agatgcacgc agttcccaac acactctatg actacgagac actgtactac 660
agctacgata atctcgaaat aggtggcagg aatctcgacc agcttcaggc tgaaattgac 720
agaagcagaa gccacgatcg cgtttttgct ggattcttgc ttcgtggaat cggaacttct 780
gctgatgtca ggtttttggat ttgtagaaat gaaaatgact gccacagggg tgggaataatt 840
ttcatcttag gtggagccaa ggaaatgcca tgggtcattg acagaaactt caagtttgat 900
atcacccatg tactcgagaa agctggcatt agcccagagg acgtgtttga tgctgaggag 960
ccattttata tcaaggttga gatccatgct gttaacaaga ccatgatacc atcgtctgtg 1020
atcccagccc caactatcat ctattctcct ggggaag                                     1057
```

<210> 197

<211> 219

<212> DNA

<213> *Haliotis tuberculata*

<400> 197

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gtcgcgctgc tgacagtgca cactcagcca acattgctgg ctctggggtg aggaaggacg 60
tcacgacct cactgtgtct gagaccgaga acctaagaca ggctcttcaa ggtgtcatcg 120
atgatactgg tccaatggt taccaagcaa tagcatcctt ccacggaagt cctccaatgt 180
gcgagatgaa cggccgcaag gttgcctgtt gtgctcacg                                     219
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<210> 198

<211> 164

<212> DNA

<213> *Haliotis tuberculata*

<400> 198

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gtatggcctc cttccacac tggcacagac tgtatgtgaa gcagatggaa gacgccctgg 60
ctgaccacgg atcacatat ggcattcctt actgggactg gacaactgcc ttcacagagt 120
taccgcctt tgtcacagac tccgagaaca atcccttcca tgag                                     164
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<210> 199
 <211> 826
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 199
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 gacccagagc aaggatcaga gtcgttcttc tatagacaag tcctcctggc tttggagcag 120
 actgactact gccagttcga agtccagttt gagctgaccc acaacgccat tcaactcctg 180
 acaggtggac gtagccctta cggaaatgtcg accctcgagt tcacagccta cgatcctctc 240
 ttctggcttc accactccaa caccgacaga atctgggctg tctggcaagc actgcagaaa 300
 taccgaggac tcccatataa cgaagcacac tgtgaaatcc aggttctgaa acagcccttg 360
 aggccattca accgatgacat caaccacaat ccaatcacca agactaatgc caggcctatc 420
 gattcatttg attatgagag gtttaactat cagtatgaca cccttagctt ccatggtaag 480
 agcatccctg aactgaatga cctgctcgag gaaagaaaaa gagaagagag aacatttgct 540
 gccttccttc ttcgtggaat cgggtgcagt gctgatgtcg tctttgacat ctgccgcccc 600
 aatgggtgact gtgtcctttg aggaaccttt gctgtgctgg gaggggagct agaaatgcct 660
 tggtccttcg acagactggt ccgctatgac atcaccagag tcatgaatca gctccatctc 720
 cagtatgatt cagatttcag tttcaggggtg aagcttggtg caaccaatgg cactgagctt 780
 tcatcagacc tcctcaagtc accaacaatt gaacatgaac ttggag 826

<210> 200
 <211> 1535
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 200
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 acttccatcg taagggaagt gattcgctgt ccctggatga agcaaaacac ttgaagaatg 120
 ccctttataa gctacagaac gaccacagtc taacaggata cgaagcaatc tctggttacc 180
 atggataccc gaatctgtgt ccggaagaag gcgatgacaa atacccttgc tgcgtccacg 240
 gaatggccat cttccccac tggcacagac tcttgaccat ccaactggaa agagctctcg 300
 agcacaatgg tgcaactgctt ggtgttcctt actgggactg gaccaaggac ctgtcgtcac 360
 tgccggcggtt cttctccgac tccagcaaca acaatcccta cttcaagtac cacatcgacg 420
 gtgttgggtc cgacaccgtc agagagccaa tagtcttat atataaccag ccccaaatcc 480
 atggttatga ttatctctat tacctagcat tgaccacgct tgaagaaaac aattactgtg 540
 actttgaggt tcagtatgag atcctccaca acgccgtcca ctctggctt ggaggatccc 600
 agaagtattc catgtctacc ctggagtatt cggcctttga ccctgtcttt atgatccttc 660
 actcgggtct agacagactt tggatcatct ggcaagaact tcagaagatc aggagaaagc 720
 cctacaactt cgctaaatgt gcttatcata tgatggaaga gccactggcg cccttcagct 780
 atccatctat caaccaggac gagttcaccc gtgccaactc caagccttct acagtttttg 840
 acagccataa gttcggctac cattacgata acctgaatgt tagaggtcac agcatccaag 900
 aactcaacac aatcatcaat gacttgagaa acacagacag aatctacgca ggatttggtt 960
 tgtcaggcat cggtagctct gctagtgtca agatctatct ccgaacagat gacaatgacg 1020
 aagaagttgg aactttcact gtcctgggag gagagaggga aatgccatgg gcctacgagc 1080
 gagttttcaa gtatgacatc acagaggttg cagatagact taaactaagt tatggggaca 1140
 cctttaactt ccgactagag atcacatcct acgatggatc ggtggtaaac aagagcctac 1200
 ccaatccttt catcatctac agacctgcca atcatgacta cgatgttctt gttatcccag 1260
 taggaagaaa ccttcacatc cctcccaaag ttgtcgtcaa gagaggcacc cgcacagagt 1320
 tccaccagct cgatgattca gttacgagac cagttgttga tcttggaagc tacactgcac 1380
 tcttcaactg tgtggtacca ccgttcacat accgcggatt cgaactgaac cacgtctatt 1440
 ctgtcaagcc tggtagctac tatgttaccg gaccaacgag agacctttgc cagaatgcag 1500
 atgtcaggat tcatatccat gttgaggatg agtaa 1535

<210> 201
 <211> 8
 <212> DNA
 <213> *Haliotis tuberculata*

<400> 201

cgcaacag

8

<210> 202

<211> 211

<212> DNA

<213> *Haliotis tuberculata*

<400> 202

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tcttctctgg caatgcattt caatacaaca ttgaaaatga cttcagcata tcagtgtgct 120
tcgaacgtgt tccggaagta ctcaaatgtg ctatgactga attattgtac atacataact 180
tattgatggt caataaataa atgttgaaac g                               211
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<210> 203

<211> 334

<212> PRT

<213> *Haliotis tuberculata*

<400> 203

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His Arg Leu Phe Val Thr Gln Val Glu Asp Ala Leu Ile Arg Arg Gly
 1              5              10              15

Ser Pro Ile Gly Val Pro Tyr Trp Asp Trp Thr Gln Pro Met Ala His
      20              25              30

Leu Pro Gly Leu Ala Asp Asn Ala Thr Tyr Arg Asp Pro Ile Ser Gly
      35              40              45

Asp Ser Arg His Asn Pro Phe His Asp Val Glu Val Ala Phe Glu Asn
 50              55              60

Gly Arg Thr Glu Arg His Pro Asp Ser Arg Leu Phe Glu Gln Pro Leu
 65              70              75              80

Phe Gly Lys His Thr Arg Leu Phe Asp Ser Ile Val Tyr Ala Phe Glu
      85              90              95

Gln Glu Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Met Thr His Asn
     100              105              110

Asn Ile His Ala Trp Ile Gly Gly Gly Lys Tyr Ser Met Ser Ser
     115              120              125

Leu His Tyr Thr Ala Phe Asp Pro Ile Ser Tyr Leu His His Ser Asn
     130              135              140

Thr Asp Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Asn
     145              150              155              160

Lys Pro Tyr Lys Ala His Cys Ala Trp Ser Glu Glu Arg Gln Pro Leu
     165              170              175

Lys Pro Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr
     180              185              190

Glu Asn Ser Val Pro Thr Asn Val Tyr Asp Tyr Glu Gly Val Leu Gly
     195              200              205

Tyr Thr Tyr Asp Asp Leu Asn Phe Gly Gly Met Asp Leu Gly Gln Leu
     210              215              220
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Glu Glu Tyr Ile Gln Arg Gln Arg Gln Arg Asp Arg Thr Phe Ala Gly
 225 230 235 240
 Phe Phe Leu Ser His Ile Gly Thr Ser Ala Asn Val Glu Ile Ile Ile
 245 250 255
 Asp His Gly Thr Leu His Thr Ser Val Gly Thr Phe Ala Val Leu Gly
 260 265 270
 Gly Glu Lys Glu Met Lys Trp Gly Phe Asp Arg Leu Tyr Lys Tyr Glu
 275 280 285
 Ile Thr Asp Glu Leu Arg Gln Leu Asn Leu Arg Ala Asp Asp Gly Phe
 290 295 300
 Ser Ile Ser Val Lys Val Thr Asp Val Asp Gly Ser Glu Leu Ser Ser
 305 310 315 320
 Glu Leu Ile Pro Ser Ala Ala Ile Ile Phe Glu Arg Ser His
 325 330

<210> 204
 <211> 415
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 204
 Ile Asp His Gln Asp Pro His Gln Asp Thr Ile Ile Arg Lys Asn Val
 1 5 10 15
 Asp Asn Leu Thr Pro Glu Glu Ile Asn Ser Leu Arg Arg Ala Met Ala
 20 25 30
 Asp Leu Gln Ser Asp Lys Thr Ala Gly Gly Phe Gln Gln Ile Ala Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Asp Ala Glu Lys Lys
 50 55 60
 Phe Ser Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Cys Leu
 85 90 95
 Gly Ala Leu Pro Tyr Trp Asp Trp Thr Arg Pro Leu Ser His Leu Pro
 100 105 110
 Asp Leu Val Ser Gln Gln Asn Tyr Thr Asp Ala Ile Ser Thr Val Glu
 115 120 125
 Ala Arg Asn Pro Trp Tyr Ser Gly His Ile Asp Thr Val Gly Val Asp
 130 135 140
 Thr Thr Arg Ser Val Arg Gln Glu Leu Tyr Glu Ala Pro Gly Phe Gly
 145 150 155 160
 His Tyr Thr Gly Val Ala Lys Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175

Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Ser Glu Pro Tyr Gly Met Ala Ser Leu Arg
 195 200 205
 Tyr Thr Thr Tyr Asp Pro Ile Phe Tyr Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Ser Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Thr Asp Glu Ile Asn Pro Asp Asp Glu Thr Arg Gln
 260 265 270
 His Ala Val Pro Phe Ser Val Phe Asp Tyr Lys Asn Asn Phe Asn Tyr
 275 280 285
 Glu Tyr Asp Thr Leu Asp Phe Asn Gly Leu Ser Ile Ser Gln Leu Asp
 290 295 300
 Arg Glu Leu Ser Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu His Gly Ile Gln Gln Ser Ala Leu Val Lys Phe Phe Val Cys
 325 330 335
 Lys Ser Asp Asp Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr Ile Leu
 340 345 350
 Gly Asp Glu Ala Glu Met Pro Trp Gly Tyr Asp Arg Leu Tyr Lys Tyr
 355 360 365
 Glu Ile Thr Glu Gln Leu Asn Ala Leu Asp Leu His Ile Gly Asp Arg
 370 375 380
 Phe Phe Ile Arg Tyr Glu Ala Phe Asp Leu His Gly Thr Ser Leu Gly
 385 390 395 400
 Ser Asn Ile Phe Pro Lys Pro Ser Val Ile His Asp Glu Gly Ala
 405 410 415

 <210> 205
 <211> 415
 <212> PRT
 <213> *Haliotis tuberculata*

 <400> 205
 Gly His His Gln Ala Asp Glu Tyr Asp Glu Val Val Thr Ala Ala Ser
 1 5 10 15
 His Ile Arg Lys Asn Leu Lys Asp Leu Ser Lys Gly Glu Val Glu Ser
 20 25 30
 Leu Arg Ser Ala Phe Leu Gln Leu Gln Asn Asp Gly Val Tyr Glu Asn
 35 40 45

Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Asp Asp Asn Gly Arg
 50 55 60
 Lys Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro Gln Trp His
 65 70 75 80
 Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
 85 90 95
 Ala Val Ser Val Pro Tyr Trp Asp Trp Thr Glu Thr Phe Thr Glu Leu
 100 105 110
 Pro Ser Leu Ile Ala Glu Ala Thr Tyr Phe Asn Ser Arg Gln Gln Thr
 115 120 125
 Phe Asp Pro Asn Pro Phe Phe Arg Gly Lys Ile Ser Phe Glu Asn Ala
 130 135 140
 Val Thr Thr Arg Asp Pro Gln Pro Glu Leu Tyr Val Asn Arg Tyr Tyr
 145 150 155 160
 Tyr Gln Asn Val Met Leu Ala Phe Glu Gln Asp Asn Tyr Cys Asp Phe
 165 170 175
 Glu Ile Gln Phe Glu Met Val His Asn Val Leu His Ala Trp Leu Gly
 180 185 190
 Gly Arg Ala Thr Tyr Ser Ile Ser Ser Leu Asp Tyr Ser Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Thr Asp Arg Leu Trp Ala Ile
 210 215 220
 Trp Gln Glu Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp
 225 230 235 240
 Cys Ala Ile Asn Leu Met Arg Lys Pro Leu His Pro Phe Asp Asn Ser
 245 250 255
 Asp Leu Asn His Asp Pro Val Thr Phe Lys Tyr Ser Lys Pro Thr Asp
 260 265 270
 Gly Phe Asp Tyr Gln Asn Asn Phe Gly Tyr Lys Tyr Asp Asn Leu Glu
 275 280 285
 Phe Asn His Phe Ser Ile Pro Arg Leu Glu Glu Ile Ile Arg Ile Arg
 290 295 300
 Gln Arg Gln Asp Arg Val Phe Ala Gly Phe Leu Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Thr Val Glu Ile Phe Val Cys Val Pro Thr Thr Ser Gly
 325 330 335
 Glu Gln Asn Cys Glu Asn Lys Ala Gly Thr Phe Ala Val Leu Gly Gly
 340 345 350
 Glu Thr Glu Met Ala Phe His Phe Asp Arg Leu Tyr Arg Phe Asp Ile
 355 360 365

Ser Glu Thr Leu Arg Asp Leu Gly Ile Gln Leu Asp Ser His Asp Phe
 370 375 380

Asp Leu Ser Ile Lys Ile Gln Gly Val Asn Gly Ser Tyr Leu Asp Pro
 385 390 395 400

His Ile Leu Pro Glu Pro Ser Leu Ile Phe Val Pro Gly Ser Ser
 405 410 415

<210> 206

<211> 418

<212> PRT

<213> *Haliotis tuberculata*

<400> 206

Ser Phe Leu Arg Pro Asp Gly His Ser Asp Asp Ile Leu Val Arg Lys
 1 5 10 15

Glu Val Asn Ser Leu Thr Thr Arg Glu Thr Ala Ser Leu Ile His Ala
 20 25 30

Leu Lys Ser Met Gln Glu Asp His Ser Pro Asp Gly Phe Gln Ala Ile
 35 40 45

Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala Thr
 50 55 60

His Arg Tyr Ala Cys Cys Val His Gly Met Ala Thr Phe Pro Gln Trp
 65 70 75 80

His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ala Leu Arg Arg His Gly
 85 90 95

Ala Ala Val Gly Val Pro Tyr Trp Asp Trp Leu Arg Pro Gln Ser His
 100 105 110

Leu Pro Glu Leu Val Thr Met Glu Thr Tyr His Asp Ile Trp Ser Asn
 115 120 125

Arg Asp Phe Pro Asn Pro Phe Tyr Gln Ala Asn Ile Glu Phe Glu Gly
 130 135 140

Glu Asn Ile Thr Thr Glu Arg Glu Val Ile Ala Asp Lys Leu Phe Val
 145 150 155 160

Lys Gly Gly His Val Phe Asp Asn Trp Phe Phe Lys Gln Ala Ile Leu
 165 170 175

Ala Leu Glu Gln Glu Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile
 180 185 190

Leu His Asn Gly Val His Thr Trp Val Gly Gly Ser Arg Thr His Ser
 195 200 205

Ile Gly His Leu His Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Leu His
 210 215 220

His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Glu Leu Gln Glu
 225 230 235 240

Gln Arg Gly Leu Ser Gly Asp Glu Ala His Cys Ala Leu Glu Gln Met
 245 250 255
 Arg Glu Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn Leu Asn
 260 265 270
 Gln Leu Thr Gln Asp Phe Ser Arg Pro Glu Asp Thr Phe Asp Tyr Arg
 275 280 285
 Lys Phe Gly Tyr Glu Tyr Asp Asn Leu Glu Phe Leu Gly Met Ser Val
 290 295 300
 Ala Glu Leu Asp Gln Tyr Ile Ile Glu His Gln Glu Asn Asp Arg Val
 305 310 315 320
 Phe Ala Gly Phe Leu Leu Ser Gly Phe Gly Gly Ser Ala Ser Val Asn
 325 330 335
 Phe Gln Val Cys Arg Ala Asp Ser Thr Cys Gln Asp Ala Gly Tyr Phe
 340 345 350
 Thr Val Leu Gly Gly Ser Ala Glu Met Ala Trp Ala Phe Asp Arg Leu
 355 360 365
 Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Glu Lys Met His Leu Arg Tyr
 370 375 380
 Asp Asp Asp Phe Thr Ile Ser Val Ser Leu Thr Ala Asn Asn Gly Thr
 385 390 395 400
 Val Leu Ser Ser Ser Leu Ile Pro Thr Pro Ser Val Ile Phe Gln Arg
 405 410 415
 Gly His

<210> 207
 <211> 416
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 207
 Arg Asp Ile Asn Thr Lys Ser Met Ser Ala Asn Arg Val Arg Arg Glu
 1 5 10 15
 Leu Ser Asp Leu Ser Ala Arg Asp Pro Ser Ser Leu Lys Ser Ala Leu
 20 25 30
 Arg Asp Leu Gln Glu Asp Asp Gly Pro Asn Gly Tyr Gln Ala Leu Ala
 35 40 45
 Ala Phe His Gly Leu Pro Ala Gly Cys His Asp Ser Gln Gly Asn Glu
 50 55 60
 Ile Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro Gln Trp His Arg
 65 70 75 80
 Leu Tyr Thr Leu Gln Leu Glu Met Ala Leu Arg Arg His Gly Ser Ser
 85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Glu Leu Pro
 100 105 110
 Ser Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp His Asp Ala Val
 115 120 125
 Val Asn Asn Pro Phe Ser Lys Gly Phe Val Lys Phe Ala Asn Thr Tyr
 130 135 140
 Thr Val Arg Asp Pro Gln Glu Met Leu Phe Gln Leu Cys Glu His Gly
 145 150 155 160
 Glu Ser Ile Leu Tyr Glu Gln Thr Leu Leu Ala Leu Glu Gln Thr Asp
 165 170 175
 Tyr Cys Asp Phe Glu Val Gln Phe Glu Val Leu His Asn Val Ile His
 180 185 190
 Tyr Leu Val Gly Gly Arg Gln Thr Tyr Ala Leu Ser Ser Leu His Tyr
 195 200 205
 Ala Ser Tyr Asp Pro Phe Phe Phe Ile His His Ser Phe Val Asp Lys
 210 215 220
 Met Trp Val Val Trp Gln Ala Leu Gln Lys Arg Arg Lys Leu Pro Tyr
 225 230 235 240
 Lys Arg Ala Asp Cys Ala Val Asn Leu Met Thr Lys Pro Met Arg Pro
 245 250 255
 Phe Asp Ser Asp Met Asn Gln Asn Pro Phe Thr Lys Met His Ala Val
 260 265 270
 Pro Asn Thr Leu Tyr Asp Tyr Glu Thr Leu Tyr Tyr Ser Tyr Asp Asn
 275 280 285
 Leu Glu Ile Gly Gly Arg Asn Leu Asp Gln Leu Gln Ala Glu Ile Asp
 290 295 300
 Arg Ser Arg Ser His Asp Arg Val Phe Ala Gly Phe Leu Leu Arg Gly
 305 310 315 320
 Ile Gly Thr Ser Ala Asp Val Arg Phe Trp Ile Cys Arg Asn Glu Asn
 325 330 335
 Asp Cys His Arg Gly Gly Ile Ile Phe Ile Leu Gly Gly Ala Lys Glu
 340 345 350
 Met Pro Trp Ser Phe Asp Arg Asn Phe Lys Phe Asp Ile Thr His Val
 355 360 365
 Leu Glu Lys Ala Gly Ile Ser Pro Glu Asp Val Phe Asp Ala Glu Glu
 370 375 380
 Pro Phe Tyr Ile Lys Val Glu Ile His Ala Val Asn Lys Thr Met Ile
 385 390 395 400
 Pro Ser Ser Val Ile Pro Ala Pro Thr Ile Ile Tyr Ser Pro Gly Glu
 405 410 415

Tyr Glu Arg Phe Asn Tyr Gln Tyr Asp Thr Leu Ser Phe His Gly Lys
 275 280 285
 Ser Ile Pro Glu Leu Asn Asp Leu Leu Glu Glu Arg Lys Arg Glu Glu
 290 295 300
 Arg Thr Phe Ala Ala Phe Leu Leu Arg Gly Ile Gly Cys Ser Ala Asp
 305 310 315 320
 Val Val Phe Asp Ile Cys Arg Pro Asn Gly Asp Cys Val Phe Ala Gly
 325 330 335
 Thr Phe Ala Val Leu Gly Gly Glu Leu Glu Met Pro Trp Ser Phe Asp
 340 345 350
 Arg Leu Phe Arg Tyr Asp Ile Thr Arg Val Met Asn Gln Leu His Leu
 355 360 365
 Gln Tyr Asp Ser Asp Phe Ser Phe Arg Val Lys Leu Val Ala Thr Asn
 370 375 380
 Gly Thr Glu Leu Ser Ser Asp Leu Leu Lys Ser Pro Thr Ile Glu His
 385 390 395 400
 Glu Leu

<210> 209
 <211> 512
 <212> PRT
 <213> *Haliotis tuberculata*

<400> 209
 Gly Ala His Arg Gly Pro Val Glu Glu Thr Glu Val Thr His Gln Asn
 1 5 10 15
 Thr Asp Gly Asn Ala His Phe His Arg Lys Glu Val Asp Ser Leu Ser
 20 25 30
 Leu Asp Glu Ala Asn Asn Leu Lys Asn Ala Leu Tyr Lys Leu Gln Asn
 35 40 45
 Asp His Ser Leu Thr Gly Tyr Glu Ala Ile Ser Gly Tyr His Gly Tyr
 50 55 60
 Pro Asn Leu Cys Pro Glu Glu Gly Asp Asp Lys Tyr Pro Cys Cys Val
 65 70 75 80
 His Gly Met Ala Ile Phe Pro His Trp His Arg Leu Leu Thr Ile Gln
 85 90 95
 Leu Glu Arg Ala Leu Glu His Asn Gly Ala Leu Leu Gly Val Pro Tyr
 100 105 110
 Trp Asp Trp Thr Lys Asp Leu Ser Ser Leu Pro Ala Phe Phe Ser Asp
 115 120 125
 Ser Ser Asn Asn Asn Pro Tyr Phe Lys Tyr His Ile Ala Gly Val Gly
 130 135 140

His Asp Thr Val Arg Glu Pro Thr Ser Leu Ile Tyr Asn Gln Pro Gln
 145 150 155 160
 Ile His Gly Tyr Asp Tyr Leu Tyr Tyr Leu Ala Leu Thr Thr Leu Glu
 165 170 175
 Glu Asn Asn Tyr Cys Asp Phe Glu Val Gln Tyr Glu Ile Leu His Asn
 180 185 190
 Ala Val His Ser Trp Leu Gly Gly Ser Gln Lys Tyr Ser Met Ser Thr
 195 200 205
 Leu Glu Tyr Ser Ala Phe Asp Pro Val Phe Met Ile Leu His Ser Gly
 210 215 220
 Leu Asp Arg Leu Trp Ile Ile Trp Gln Glu Leu Gln Lys Ile Arg Arg
 225 230 235 240
 Lys Pro Tyr Asn Phe Ala Lys Cys Ala Tyr His Met Met Glu Glu Pro
 245 250 255
 Leu Ala Pro Phe Ser Tyr Pro Ser Ile Asn Gln Asp Glu Phe Thr Arg
 260 265 270
 Ala Asn Ser Lys Pro Ser Thr Val Phe Asp Ser His Lys Phe Gly Tyr
 275 280 285
 His Tyr Asp Asn Leu Asn Val Arg Gly His Ser Ile Gln Glu Leu Asn
 290 295 300
 Thr Ile Ile Asn Asp Leu Arg Asn Thr Asp Arg Ile Tyr Ala Gly Phe
 305 310 315 320
 Val Leu Ser Gly Ile Gly Thr Ser Ala Ser Val Lys Ile Tyr Leu Arg
 325 330 335
 Thr Asp Asp Asn Asp Glu Glu Val Gly Thr Phe Thr Val Leu Gly Gly
 340 345 350
 Glu Arg Glu Met Pro Trp Ala Tyr Glu Arg Val Phe Lys Tyr Asp Ile
 355 360 365
 Thr Glu Val Ala Asp Arg Leu Lys Leu Ser Tyr Gly Asp Thr Phe Asn
 370 375 380
 Phe Arg Leu Glu Ile Thr Ser Tyr Asp Gly Ser Val Val Asn Lys Ser
 385 390 395 400
 Leu Pro Asn Pro Phe Ile Ile Tyr Arg Pro Ala Asn His Asp Tyr Asp
 405 410 415
 Val Leu Val Ile Pro Val Gly Arg Asn Leu His Ile Pro Pro Lys Val
 420 425 430
 Val Val Lys Arg Gly Thr Arg Ile Glu Phe His Pro Val Asp Asp Ser
 435 440 445
 Val Thr Arg Pro Val Val Asp Leu Gly Ser Tyr Thr Ala Leu Phe Asn
 450 455 460

Cys Val Val Pro Pro Phe Thr Tyr Arg Gly Phe Glu Leu Asn His Val
 465 470 475 480

Tyr Ser Val Lys Pro Gly Asp Tyr Tyr Val Thr Gly Pro Thr Arg Asp
 485 490 495

Leu Cys Gln Asn Ala Asp Val Arg Ile His Ile His Val Glu Asp Glu
 500 505 510

<210> 210
 <211> 967
 <212> DNA
 <213> Megathura crenulata

<400> 210
 ggcctaccgt actgggactg gactgaaccc atgacacaca ttccgggtct ggcaggaaac 60
 aaaacttatg tggattctca tgggtgcatcc cacacaaatc cttttcatag ttcagtgtatt 120
 gcatttgaag aaaatgctcc ccacaccaa agacaaatag atcaaagact ctttaaacc 180
 gctacctttg gacaccacac agacctgttc aaccagattt tgtatgcctt tgaacaagaa 240
 gattactgtg actttgaagt ccaatttgag attaccata acacgattca cgcttggaca 300
 ggaggaagcg aacatttctc aatgtcgtcc ctacattaca cagctttcga tcctttgttt 360
 tactttcacc attctaactg tgatcgtctt tgggcccgtt ggcaagcctt acagatgaga 420
 cggcataaac cctacagggc ccactgcgcc atatctctgg aacatatgca tctgaaacca 480
 ttgcgctttt catctccctt taacaataac gaaaagactc atgccaatgc catgcccacc 540
 aagatctacg actatgaaaa tgtcctccat tacacatacg aagatttaac atttggaggc 600
 atctctctgg aaaacataga aaagatgatc cacgaaaaac agcaagaaga cagaatatat 660
 gccgggtttt tcctggctgg catacgtact tcagcaaatg ttgatattct cattaaaact 720
 accgattccg tgcaacataa ggctggaaca ttgacgtgc tcgggtggaag caaggaaatg 780
 aagtggggat ttgatcgcgt tttcaagttt gacatcacgc acgttttgaa agatctcgat 840
 ctactgctg atggcgattt cgaagttact gttgacatca ctgaagtcga tggaaactaaa 900
 cttgcatcca gtcttattcc acatgcttct gtcattcgtg agcatgcacg tggtaagctg 960
 aatagag 967

<210> 211
 <211> 1242
 <212> DNA
 <213> Megathura crenulata

<400> 211
 ttaaatttga caaagtgcc aggagtcgtc ttattcgaaa aaatgtagac cgtttgagcc 60
 ccgaggagat gaatgaactt cgtaaagccc tagccttact gaaagaggac aaaagtgccg 120
 gtggatttca gcagcttggg gcattccatg gggagccaaa atggtgtcct agtcccgaag 180
 catctaaaaa atttgctgct tgtgttcacg gcatgtctgt gttccctcac tggcatcgac 240
 tgttgacggg tcagagtga aatgctttga gacgacatgg ctacgatgga gctttgccgt 300
 actgggattg gacctctcct cttaatcacc ttcccgaact ggcagatcat gagaagtacg 360
 tcgaccctga agatggggta gagaagcata acccttgggt cgatgggtcat atagatacag 420
 tcgacaaaac aacaacaaga agtggttcaga ataaactctt cgaacagcct gagtttgggtc 480
 attatacaag cattgccaaa caagtactgc tagcgttggg acaggacaat ttctgtgact 540
 ttgaaatcca atatgagatt gcccataact acatccatgc acttgtagga ggcgctcagc 600
 cttatgggtat ggcacgcgtt cgctacactg cttttgatcc actattctac ttgcatcact 660
 ctaatacaga tcgtatatgg gcaatatggc aggtctttaca gaagtacaga ggaaaaccgt 720
 acaacggttg taactgtgct gttacatcga tgagagaacc tttgcaacca tttggcctct 780
 ctgccaatat caacacagac catgtaacca aggagcattc agtgccattc aacgtttttg 840
 attacaagac caatttcaat tatgaatatg acactttgga atttaacggg ctctcaatct 900
 ctcaagttgaa taaaagctc gaagcgataa agagccaaga caggttcttt gcaggcttcc 960
 tgttatctgg tttcaagaaa tcatctcttg ttaaatcaca tatttgcacc gatagcagca 1020
 actgtcacc cgtgagagag ttttaccttc tgggtgatga aaacgagatg ccatgggcat 1080

acgatatagagt cttcaaatat gacataaccg aaaaactcca cgatctaaag ctgcatgcag 1140
aagaccactt ctacattgac tatgaagtat ttgaccttaa accagcaagc ctgggaaaaa 1200
atttgttcaa gcagccttca gtcattcatg aaccaagaat ag 1242

<210> 212

<211> 1236

<212> DNA

<213> Megathura crenulata

<400> 212

gtcaccatga aggcgaagta tatcaagctg aagtaacttc tgccaaccgt attcgaaaaa 60
acattgaaaa tctgagcctt ggtgaactcg aaagtctgag agctgccttc ctggaaaattg 120
aaaacgatgg aacttacgaa tcaatagcta aattccatgg tagccctggg ttgtgccagt 180
taaatggtaa ccccatctct tgttggtgcc atggcatgcc aactttccct cactggcaca 240
gactgtacgt ggttgctcgtt gagaatgcc tcttgaaaaa aggatcatct gtagctgttc 300
cctattggga ctggacaaaa cgaatcgaac atttacctca cctgatttca gacgccactt 360
actacaattc caggcaacat cactatgaga caaacccatt ccatcatggc aaaatcacac 420
acgagaatga aatcactact agggatccca aggacagcct cttccattca gactactttt 480
acgagcaggt cctttacgcc ttggagcagg ataacttctg tgatttcgag attcagttgg 540
agatattaca caatgcattg cattctttac ttggtggcaa aggtaaaat tccatgtcaa 600
accttgatta cgctgctttt gatcctgtgt tcttccttca tcacgcaacg actgacagaa 660
tctgggcaat ctggcaagac cttcagaggt tccgaaaacg gccataccga gaagcgaatt 720
gcgctatcca attgatgcac acgccactcc agccgtttga taagagcgac aacaatgacg 780
aggcaacgaa aacgcatgcc actccacatg atggttttga atatcaaaac agctttgggt 840
atgcttacga taatctggaa ctgaatcact actcgattcc tcagcttgat cacatgctgc 900
aagaaagaaa aaggcatgac agagtattcg ctggcttctt ccttcacaat attggaacat 960
ctgccgatgg ccatgtattt gtatgtctcc caactgggga acacacgaag gactgcagtc 1020
atgaggctgg tatgttctcc atcttagggc gtcaaacgga gatgtccttt gtatttgaca 1080
gactttacaa acttgacata actaaagcct tgaaaaagaa cgggtgtgcac ctgcaagggg 1140
atttcgatct ggaaattgag attacggctg tgaatggatc tcacttagac agtcatgtca 1200
tccactctcc cactatactg tttgaggccg gaacag 1236

<210> 213

<211> 1257

<212> DNA

<213> Megathura crenulata

<400> 213

attctgcccc cacagatgat ggacacactg aaccagtgat gattcgcaaa gatatacacac 60
aattggacaa gcgtcaacaa ctgtcactgg tgaaagccct cgagtccatg aaagccgacc 120
attcatctga tgggttccag gcaatcgctt ccttccatgc tcttctctct ctttgtccat 180
caccagctgc ttcaaagagg tttgcgtgct gcgtccatgg catggcaacg tccccacaat 240
ggcaccgtct gtacacagtc caattccaag attctctcag aaaacatggg gcagtcgttg 300
gacttccgta ctgggactgg accctacctc gttctgaatt accagagctc ctgaccgtct 360
caactattca tgaccggag acaggcagag atataccaaa tccatttatt ggttctaaaa 420
tagagtttga aggagaaaac gtacatacta aaagagatat caatagggat cgtctcttcc 480
agggatcaac aaaaacacat cataactggt ttattgagca agcactgctt gctcttgaac 540
aaaccaacta ctgcgacttc gaggttcagt ttgaaattat gcataatggg gttcatacct 600
gggttgagg caaggagccc tatggaattg gccatctgca ttatgcttcc tatgatccac 660
ttttctacat ccatcactcc caaactgatc gtatttgggc tatatggcaa tcgttgacgc 720
gtttcagagg actttctgga tctgaggcta actgtgctgt aaatctcatg aaaactcttc 780
tgaagccttt cagctttgga gcaccatata atcttaatga tcacacgcac gatttctcaa 840
agcctgaaga tacattcgac taccaaaagt ttggatacat atatgacact ctggaatttg 900
caggggtggtc aattcgtggc attgaccata ttgtccgtaa caggcaggaa cattcaaggg 960
tctttgccgg attcttgctt gaaggatttg gcacctctgc cactgtcgat ttccaggtct 1020
gtcgcacagc gggagactgt gaagatgcag ggtacttcac cgtgttggga ggtgaaaaag 1080
aaatgccttg ggcctttgat cggctttaca agtacgacat aacagaaacc ttagacaaga 1140
tgaaccttcg acatgacgaa atcttccaga ttgaagtaac cattacatcc tacgatggaa 1200
ctgtactcga tagtggcctt attcccacac cgtcaatcat ctatgatcct gctcatc 1257

<210> 214
 <211> 191
 <212> DNA
 <213> Megathura crenulata

<400> 214
 atgatattag ttgcgaccac ctgtcgctca acaagggttcg tcatgatctg agtacactga 60
 gtgagcgaga tattggaagc cttaaatatg ctttgagcag cttgcaggca gatacctcag 120
 cagatgggtt tgctgccatt gcatccttcc atgggtctgcc tgccaaatgt aatgacagcc 180
 acaataacga g 191

<210> 215
 <211> 1063
 <212> DNA
 <213> Megathura crenulata

<400> 215
 gtggcatgct gtatccatgg aatgcctaca ttccccact ggacacagact ctacaccctc 60
 caatttgagc aagctctaag aagacatggc tctagtgtag cagtacccta ctgggactgg 120
 acaaagccaa tacataatat tccacatctg ttcacagaca aagaatacta cgatgtctgg 180
 agaaataaag taatgccaaa tccatttgcc cgagggtatg tccccacaca cgatacatac 240
 acggtaagag acgtccaaga aggcctgttc cacctgacat caacgggtga aactcagcg 300
 cttctgaatc aagctctttt ggcgctggaa cagcacgact actgcgattt tgcagtccag 360
 tttgaagtca tgcacaacac aatccattac ctagtgggag gacctcaagt ctattctttg 420
 tcatcccttc attatgcttc atatgatccg atcttcttca tacaccactc ctttgtagac 480
 aaggtttggg ctgtctggca ggctcttcaa gaaaagagag gccttccatc agaccgtgct 540
 gactgcgctg ttagtctgat gactcagaac atgaggcctt tccattacga aattaacct 600
 aaccagttca ccaagaaaca tgcagttcca aatgatgttt tcaagtacga actcctgggt 660
 tacagatacg acaatctgga aatcggtggc atgaatttgc atgaaattga aaaggaaatc 720
 aaagacaaac agcaccatgt gagagtgttt gcagggttcc tccttcacgg aattagaacc 780
 tcagctgatg tccaattcca gatttgtaaa acatcagaag attgtcacca tggaggccaa 840
 atcttcgttc ttggggggac taaagagatg gcctgggctt ataaccgttt attcaagtac 900
 gatattaccc atgctcttca tgacgcacac atcactccag aagacgtatt ccatccctct 960
 gaaccattct tcataaagg gtcagtgaca gccgtcaacg gaacagttct tccggcttca 1020
 atcctgcatg caccaacctat tatctatgaa cctgggtctcg gtg 1063

<210> 216
 <211> 219
 <212> DNA
 <213> Megathura crenulata

<400> 216
 accatcacga agatcatcat tcttcttcta tggttgagca tgggtgtcaga aaggaaatca 60
 acacacttac cactgcagag gtggacaatc tcaaagatgc catgagagcc gtcattggcag 120
 accacggtcc aaatggatac caggctatag cagcgttcca tggaaaccca ccaatgtgcc 180
 ctatgccaga tggaaagaat tactcgtgtt gtacacatg 219

<210> 217
 <211> 164
 <212> DNA
 <213> Megathura crenulata

<400> 217
 gcatggctac tttccccac tggcacagac tgtacacaaa acagatggaa gatgccttga 60
 ccgcccattg tgccagagtc ggccttccct actgggagcg gacaactgcc tttacagctt 120
 tgccaacttt tgtcacagat gaagaggaca atcctttcca tcat 164

<210> 218
 <211> 126
 <212> DNA
 <213> Megathura crenulata

<400> 218
 gggtcacatag actatttggg agtggatata actcggtcgc cccgagacaa gttgttcaat 60
 gatccagagc gaggatcaga atcgttcttc tacaggcagg ttctcttggc tttggagcag 120
 acagat 126

<210> 219
 <211> 322
 <212> PRT
 <213> Megathura crenulata

<400> 219
 Gly Leu Pro Tyr Trp Asp Trp Thr Glu Pro Met Thr His Ile Pro Gly
 1 5 10 15
 Leu Ala Gly Asn Lys Thr Tyr Val Asp Ser His Gly Ala Ser His Thr
 20 25 30
 Asn Pro Phe His Ser Ser Val Ile Ala Phe Glu Glu Asn Ala Pro His
 35 40 45
 Thr Lys Arg Gln Ile Asp Gln Arg Leu Phe Lys Pro Ala Thr Phe Gly
 50 55 60
 His His Thr Asp Leu Phe Asn Gln Ile Leu Tyr Ala Phe Glu Gln Glu
 65 70 75 80
 Asp Tyr Cys Asp Phe Glu Val Gln Phe Glu Ile Thr His Asn Thr Ile
 85 90 95
 His Ala Trp Thr Gly Gly Ser Glu His Phe Ser Met Ser Ser Leu His
 100 105 110
 Tyr Thr Ala Phe Asp Pro Leu Phe Tyr Phe His His Ser Asn Val Asp
 115 120 125
 Arg Leu Trp Ala Val Trp Gln Ala Leu Gln Met Arg Arg His Lys Pro
 130 135 140
 Tyr Arg Ala His Cys Ala Ile Ser Leu Glu His Met His Leu Lys Pro
 145 150 155 160
 Phe Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr His Ala Asn
 165 170 175
 Ala Met Pro Asn Lys Ile Tyr Asp Tyr Glu Asn Val Leu His Tyr Thr
 180 185 190
 Tyr Glu Asp Leu Thr Phe Gly Gly Ile Ser Leu Glu Asn Ile Glu Lys
 195 200 205
 Met Ile His Glu Asn Gln Gln Glu Asp Arg Ile Tyr Ala Gly Phe Leu
 210 215 220
 Leu Ala Gly Ile Arg Thr Ser Ala Asn Val Asp Ile Phe Ile Lys Thr
 225 230 235 240
 Thr Asp Ser Val Gln His Lys Ala Gly Thr Phe Ala Val Leu Gly Gly
 245 250 255

Ser Lys Glu Met Lys Trp Gly Phe Asp Arg Val Phe Lys Phe Asp Ile
 260 265 270

Thr His Val Leu Lys Asp Leu Asp Leu Thr Ala Asp Gly Asp Phe Glu
 275 280 285

Val Thr Val Asp Ile Thr Glu Val Asp Gly Thr Lys Leu Ala Ser Ser
 290 295 300

Leu Ile Pro His Ala Ser Val Ile Arg Glu His Ala Arg Gly Lys Leu
 305 310 315 320

Asn Arg

<210> 220

<211> 414

<212> PRT

<213> Megathura crenulata

<400> 220
 Val Lys Phe Asp Lys Val Pro Arg Ser Arg Leu Ile Arg Lys Asn Val
 1 5 10 15

Asp Arg Leu Ser Pro Glu Glu Met Asn Glu Leu Arg Lys Ala Leu Ala
 20 25 30

Leu Leu Lys Glu Asp Lys Ser Ala Gly Gly Phe Gln Gln Leu Gly Ala
 35 40 45

Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Ser Lys Lys
 50 55 60

Phe Ala Cys Cys Val His Gly Met Ser Val Phe Pro His Trp His Arg
 65 70 75 80

Leu Leu Thr Val Gln Ser Glu Asn Ala Leu Arg Arg His Gly Tyr Asp
 85 90 95

Gly Ala Leu Pro Tyr Trp Asp Trp Thr Ser Pro Leu Asn His Leu Pro
 100 105 110

Glu Leu Ala Asp His Glu Lys Tyr Val Asp Pro Glu Asp Gly Val Glu
 115 120 125

Lys His Asn Pro Trp Phe Asp Gly His Ile Asp Thr Val Asp Lys Thr
 130 135 140

Thr Thr Arg Ser Val Gln Asn Lys Leu Phe Glu Gln Pro Glu Phe Gly
 145 150 155 160

His Tyr Thr Ser Ile Ala Lys Gln Val Leu Leu Ala Leu Glu Gln Asp
 165 170 175

Asn Phe Cys Asp Phe Glu Ile Gln Tyr Glu Ile Ala His Asn Tyr Ile
 180 185 190

His Ala Leu Val Gly Gly Ala Gln Pro Tyr Gly Met Ala Ser Leu Arg
 195 200 205

Tyr Thr Ala Phe Asp Pro Leu Phe Tyr Leu His His Ser Asn Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Val Ala Asn Cys Ala Val Thr Ser Met Arg Glu Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Ser Ala Asn Ile Asn Thr Asp His Val Thr Lys Glu
 260 265 270
 His Ser Val Pro Phe Asn Val Phe Asp Tyr Lys Thr Asn Phe Asn Tyr
 275 280 285
 Glu Tyr Asp Thr Leu Glu Phe Asn Gly Leu Ser Ile Ser Gln Leu Asn
 290 295 300
 Lys Lys Leu Glu Ala Ile Lys Ser Gln Asp Arg Phe Phe Ala Gly Phe
 305 310 315 320
 Leu Leu Ser Gly Phe Lys Lys Ser Ser Leu Val Lys Phe Asn Ile Cys
 325 330 335
 Thr Asp Ser Ser Asn Cys His Pro Ala Gly Glu Phe Tyr Leu Leu Gly
 340 345 350
 Asp Glu Asn Glu Met Pro Trp Ala Tyr Asp Arg Val Phe Lys Tyr Asp
 355 360 365
 Ile Thr Glu Lys Leu His Asp Leu Lys Leu His Ala Glu Asp His Phe
 370 375 380
 Tyr Ile Asp Tyr Glu Val Phe Asp Leu Lys Pro Ala Ser Leu Gly Lys
 385 390 395 400
 Asp Leu Phe Lys Gln Pro Ser Val Ile His Glu Pro Arg Ile
 405 410

<210> 221
 <211> 411
 <212> PRT
 <213> Megathura crenulata

<400> 221
 Gly His His Glu Gly Glu Val Tyr Gln Ala Glu Val Thr Ser Ala Asn
 1 5 10 15
 Arg Ile Arg Lys Asn Ile Glu Asn Leu Ser Leu Gly Glu Leu Glu Ser
 20 25 30
 Leu Arg Ala Ala Phe Leu Glu Ile Glu Asn Asp Gly Thr Tyr Glu Ser
 35 40 45
 Ile Ala Lys Phe His Gly Ser Pro Gly Leu Cys Gln Leu Asn Gly Asn
 50 55 60
 Pro Ile Ser Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
 65 70 75 80

Ile His Ser Pro Thr Ile Leu Phe Glu Ala Gly
 405 410

<210> 222
 <211> 420
 <212> PRT
 <213> Megathura crenulata

<400> 222
 Thr Asp Ser Ala His Thr Asp Asp Gly His Thr Glu Pro Val Met Ile
 1 5 10 15
 Arg Lys Asp Ile Thr Gln Leu Asp Lys Arg Gln Gln Leu Ser Leu Val
 20 25 30
 Lys Ala Leu Glu Ser Met Lys Ala Asp His Ser Ser Asp Gly Phe Gln
 35 40 45
 Ala Ile Ala Ser Phe His Ala Leu Pro Pro Leu Cys Pro Ser Pro Ala
 50 55 60
 Ala Ser Lys Arg Phe Ala Cys Cys Val His Gly Met Ala Thr Phe Pro
 65 70 75 80
 Gln Trp His Arg Leu Tyr Thr Val Gln Phe Gln Asp Ser Leu Arg Lys
 85 90 95
 His Gly Ala Val Val Gly Leu Pro Tyr Trp Asp Trp Thr Leu Pro Arg
 100 105 110
 Ser Glu Leu Pro Glu Leu Leu Thr Val Ser Thr Ile His Asp Pro Glu
 115 120 125
 Thr Gly Arg Asp Ile Pro Asn Pro Phe Ile Gly Ser Lys Ile Glu Phe
 130 135 140
 Glu Gly Glu Asn Val His Thr Lys Arg Asp Ile Asn Arg Asp Arg Leu
 145 150 155 160
 Phe Gln Gly Ser Thr Lys Thr His His Asn Trp Phe Ile Glu Gln Ala
 165 170 175
 Leu Leu Ala Leu Glu Gln Thr Asn Tyr Cys Asp Phe Glu Val Gln Phe
 180 185 190
 Glu Ile Met His Asn Gly Val His Thr Trp Val Gly Gly Lys Glu Pro
 195 200 205
 Tyr Gly Ile Gly His Leu His Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr
 210 215 220
 Ile His His Ser Gln Thr Asp Arg Ile Trp Ala Ile Trp Gln Ser Leu
 225 230 235 240
 Gln Arg Phe Arg Gly Leu Ser Gly Ser Glu Ala Asn Cys Ala Val Asn
 245 250 255
 Leu Met Lys Thr Pro Leu Lys Pro Phe Ser Phe Gly Ala Pro Tyr Asn
 260 265 270

Leu Asn Asp His Thr His Asp Phe Ser Lys Pro Glu Asp Thr Phe Asp
 275 280 285

Tyr Gln Lys Phe Gly Tyr Ile Tyr Asp Thr Leu Glu Phe Ala Gly Trp
 290 295 300

Ser Ile Arg Gly Ile Asp His Ile Val Arg Asn Arg Gln Glu His Ser
 305 310 315 320

Arg Val Phe Ala Gly Phe Leu Leu Glu Gly Phe Gly Thr Ser Ala Thr
 325 330 335

Val Asp Phe Gln Val Cys Arg Thr Ala Gly Asp Cys Glu Asp Ala Gly
 340 345 350

Tyr Phe Thr Val Leu Gly Gly Glu Lys Glu Met Pro Trp Ala Phe Asp
 355 360 365

Arg Leu Tyr Lys Tyr Asp Ile Thr Glu Thr Leu Asp Lys Met Asn Leu
 370 375 380

Arg His Asp Glu Ile Phe Gln Ile Glu Val Thr Ile Thr Ser Tyr Asp
 385 390 395 400

Gly Thr Val Leu Asp Ser Gly Leu Ile Pro Thr Pro Ser Ile Ile Tyr
 405 410 415

Asp Pro Ala His
 420

<210> 223

<211> 418

<212> PRT

<213> Megathura crenulata

<400> 223

His Asp Ile Ser Ser His His Leu Ser Leu Asn Lys Val Arg His Asp
 1 5 10 15

Leu Ser Thr Leu Ser Glu Arg Asp Ile Gly Ser Leu Lys Tyr Ala Leu
 20 25 30

Ser Ser Leu Gln Ala Asp Thr Ser Ala Asp Gly Phe Ala Ala Ile Ala
 35 40 45

Ser Phe His Gly Leu Pro Ala Lys Cys Asn Asp Ser His Asn Asn Glu
 50 55 60

Val Ala Cys Cys Ile His Gly Met Pro Thr Phe Pro His Trp His Arg
 65 70 75 80

Leu Tyr Thr Leu Gln Phe Glu Gln Ala Leu Arg Arg His Gly Ser Ser
 85 90 95

Val Ala Val Pro Tyr Trp Asp Trp Thr Lys Pro Ile His Asn Ile Pro
 100 105 110

His Leu Phe Thr Asp Lys Glu Tyr Tyr Asp Val Trp Arg Asn Lys Val
 115 120 125

Met Pro Asn Pro Phe Ala Arg Gly Tyr Val Pro Ser His Asp Thr Tyr
 130 135 140
 Thr Val Arg Asp Val Gln Glu Gly Leu Phe His Leu Thr Ser Thr Gly
 145 150 155 160
 Glu His Ser Ala Leu Leu Asn Gln Ala Leu Leu Ala Leu Glu Gln His
 165 170 175
 Asp Tyr Cys Asp Phe Ala Val Gln Phe Glu Val Met His Asn Thr Ile
 180 185 190
 His Tyr Leu Val Gly Gly Pro Gln Val Tyr Ser Leu Ser Ser Leu His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Ile Phe Phe Ile His His Ser Phe Val Asp
 210 215 220
 Lys Val Trp Ala Val Trp Gln Ala Leu Gln Glu Lys Arg Gly Leu Pro
 225 230 235 240
 Ser Asp Arg Ala Asp Cys Ala Val Ser Leu Met Thr Gln Asn Met Arg
 245 250 255
 Pro Phe His Tyr Glu Ile Asn His Asn Gln Phe Thr Lys Lys His Ala
 260 265 270
 Val Pro Asn Asp Val Phe Lys Tyr Glu Leu Leu Gly Tyr Arg Tyr Asp
 275 280 285
 Asn Leu Glu Ile Gly Gly Met Asn Leu His Glu Ile Glu Lys Glu Ile
 290 295 300
 Lys Asp Lys Gln His His Val Arg Val Phe Ala Gly Phe Leu Leu His
 305 310 315 320
 Gly Ile Arg Thr Ser Ala Asp Val Gln Phe Gln Ile Cys Lys Thr Ser
 325 330 335
 Glu Asp Cys His His Gly Gly Gln Ile Phe Val Leu Gly Gly Thr Lys
 340 345 350
 Glu Met Ala Trp Ala Tyr Asn Arg Leu Phe Lys Tyr Asp Ile Thr His
 355 360 365
 Ala Leu His Asp Ala His Ile Thr Pro Glu Asp Val Phe His Pro Ser
 370 375 380
 Glu Pro Phe Phe Ile Lys Val Ser Val Thr Ala Val Asn Gly Thr Val
 385 390 395 400
 Leu Pro Ala Ser Ile Leu His Ala Pro Thr Ile Ile Tyr Glu Pro Gly
 405 410 415
 Leu Gly

<210> 224
 <211> 170
 <212> PRT
 <213> Megathura crenulata

<400> 224
 Asp His His Glu Asp His His Ser Ser Ser Met Ala Gly His Gly Val
 1 5 10 15
 Arg Lys Glu Ile Asn Thr Leu Thr Thr Ala Glu Val Asp Asn Leu Lys
 20 25 30
 Asp Ala Met Arg Ala Val Met Ala Asp His Gly Pro Asn Gly Tyr Gln
 35 40 45
 Ala Ile Ala Ala Phe His Gly Asn Pro Pro Met Cys Pro Met Pro Asp
 50 55 60
 Gly Lys Asn Tyr Ser Cys Cys Thr His Gly Met Ala Thr Phe Pro His
 65 70 75 80
 Trp His Arg Leu Tyr Thr Lys Gln Met Glu Asp Ala Leu Thr Ala His
 85 90 95
 Gly Ala Arg Val Gly Leu Pro Tyr Trp Asp Gly Thr Thr Ala Phe Thr
 100 105 110
 Ala Leu Pro Thr Phe Val Thr Asp Glu Glu Asp Asn Pro Phe His His
 115 120 125
 Gly His Ile Asp Tyr Leu Gly Val Asp Thr Thr Arg Ser Pro Arg Asp
 130 135 140
 Lys Leu Phe Asn Asp Pro Glu Arg Gly Ser Glu Ser Phe Phe Tyr Arg
 145 150 155 160
 Gln Val Leu Leu Ala Leu Glu Gln Thr Asp
 165 170

<210> 225
 <211> 949
 <212> DNA
 <213> Megathura crenulata

<400> 225
 ggccctgccct actgggattg gaccatgccca atgagtcatt tgccagaact ggctacaagt 60
 gagacctacc tcgatccagt tactggggaa actaaaaaca accctttcca tcacgcccac 120
 gtggcggtttg aaaatggtgt aacaagcagg aatcctgatg ccaaactttt tatgaaacca 180
 acttacggag accacactta cctcttcgac agcatgatct acgcatttga gcaggaagac 240
 ttctgcgact ttgaagtcca atatgagctc acgcataatg caatacatgc atggggttga 300
 ggcatgaaaa agtattcaat gtcttctctt cactacactg cttttgatcc tatattttac 360
 ctccatcact caaatgttga tcgtctctgg gccatttggc aagctcttca aatcaggaga 420
 ggcaagtctt acaaggccca ctgcgcctcg tctcaagaaa gagaaccatt aaagcctttt 480
 gcattcagtt cccactgaa caacaacgag aaaacgtacc acaactctgt cccactaac 540
 gtttatgact atgtgggagt tttgcactat cgatatgatg accttcagtt tggcggtatg 600
 accatgtcag aacttgagga atatattcac aagcagacac aacatgatag aacctttgca 660
 ggattcttcc tttcatatat tggaaacatca gcaagcgtag atatcttcat caatcgagaa 720
 ggtcatgata aatacaaagt gggaagtttt gtagtacttg gtggatccaa agaaatgaaa 780
 tggggctttg atagaatgta caagtatgag atcactgagg ctctgaagac gctgaatgtt 840
 gcagtggatg atgggttcag cattactggt gagatcaccg atgttgatgg atctcccca 900

tctgcagatc tcattccacc tcctgctata atctttgacg tggtcagag

949

<210> 226

<211> 1248

<212> DNA

<213> Megathura crenulata

<400> 226

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ctgatgccaa agactttggc catagcagaa aaatcaggaa agccgttgat tctctgacag 60
tcgaagaaca aacttcgttg aggcgagcta tggcagatct acaggacgac aaaacatcag 120
gggggtttcca gcagattgca gcattccacg gagaaccaa atggtgtcca agccccgaag 180
cggagaaaaa atttgcatgc tgtgttcatg gaatggctgt tttccctcac tggcacagat 240
tgctgacagt tcaaggagaa aatgctctga ggaaacatgg atttactggg ggattgccct 300
attgggactg gactcggcca atgagcgccc tccacattt tgttgcctgat cctacttaca 360
atgattctgt ttccagcctc gaagaagata acccatggta tcatggtcac atagattctg 420
ttgggcatga tactacaaga gctgtgcgtg atgatcttta tcaatctcct gggttcggtc 480
actacacaga tattgcaaaa caagtccttc tggcctttga gcaggacgat ttctgtgatt 540
ttgaggatga atttgaaatt gcccataatt tcatacatgc tctggttggg ggtaacgaac 600
catacagtat gtcatctttg aggtatacta catacgatcc aatcttcttc ttgcaccgct 660
ccaatacaga ccgacttttg gccatttggc aagctttgca aaaataccgg gggaaacat 720
acaacactgc aaactgtgcc attgcatcca tgagaaaacc acttcagcca tttggtcttg 780
atagtgtcat aaatccagat gacgaaactc gtgaacattc gggtcctttc cgagtcttcg 840
actacaagaa caacttcgac tatgagtatg agagcctggc atttaatggg ctgtctattg 900
cccaactgga ccgagagttg cagagaagaa agtcacatga cagagtcttt gcaggattcc 960
ttcttcatga aattggacag tctgcaactc tgaaattcta cgtttgcaa cacaatgtat 1020
ctgactgtga ccattatgct ggagaattct acattttggg agatgaagct gagatgcctt 1080
ggaggtatga ccgtgtgtac aagtacgaga taacacagca gctgcacgat ttagatctac 1140
atgttgagaa taatttcttc cttaaatatg aagcctttga tctgaatggc ggaagtcttg 1200
gtggaagtat cttttctcag ccttcggtga ttttcgagcc agctgcag 1248
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<210> 227

<211> 1257

<212> DNA

<213> Megathura crenulata

<400> 227

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gttcacacca ggctgatgaa tatcgtgagg cagtaacaag cgctagccac ataagaaaaa 60
atatccggga cctctcagag ggagaaattg agagcatcag atctgctttc ctccaaattc 120
aaaaagaggg tatatatgaa aacattgcaa agttccatgg aaaaccagga ctttgtgaac 180
atgatggaca tctgtgtgct tgttgtgtcc atggcatgcc cacttttccc cactggcaca 240
gactgtacgt tcttcagggtg gagaatgcgc tcttagaacg aggtctgca gttgctgttc 300
cttactggga ctggaccgag aaagctgact ctctgccatc attaatcaat gatgcaactt 360
atttcaattc acgatcccag acctttgatc ctaatccttt cttcagggga catattgcct 420
tcgagaatgc tgtgacgtcc agagatcctc agccagaact atgggacaat aaggacttct 480
acgagaatgt catgctggct cttgagcaag acaacttctg tgactttgag attcagcttg 540
agctgataca caacgccctt cattctagac ttggaggaag ggctaaatac tccctttcgt 600
ctcttgatta taccgcattt gatcctgtat ttttccttca ccatgcaaac gttgacagaa 660
tctgggcat ctggcaggac ttgcagagat atagaaagaa accatacaat gaggctgact 720
gcgcagtcaa cgagatgcgt aaacctcttc aaccatttaa taaccagaa ctttaacagt 780
attccatgac gcttaaacac aacctccac aagacagttt tgattatcaa aaccgcttca 840
ggtaccaata tgataacctt caatttaacc acttcagcat acaaaagcta gaccaaacta 900
ttcaggctag aaaacaacac gacagagttt ttgctggctt tattcttcac aacattggga 960
catctgctgt ttagatatt tatatttgcg ttgaacaagg aggagaacaa aactgcaaga 1020
caaaggcggg ttccttcacg attctggggg gagaacaga aatgccattc cactttgacc 1080
gcttgataca atttgacata acgtctgctc tgcataaact tgggtgtccc ttggacggac 1140
atggattcga catcaaagt gacgtcagag ctgtcaatgg atcgatctt gatcaacaca 1200
tcctcaacga accgagtctg ctttttgttc ctggtgaacg taagaatata tattatg 1257
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<210> 228
 <211> 1239
 <212> DNA
 <213> Megathura crenulata

<400> 228
 atgggctttc acaacataat cttgtgcgaa aagaagtaag ctctctttaca acactggaga 60
 aacatttttt gaggaagct ctcaagaaca tgcaagcaga tgattctcca gacggatatc 120
 aagctattgc ttctttccac gctttgcctc ctctttgtcc aagtccatct gctgcacata 180
 gacacgcttg ttgcctccat ggtatggcta ccttccctca gtggcacaga ctctacacag 240
 ttgagttcga agattctttg aaacgacatg gttctattgt cggacttcca tattgggatt 300
 ggctgaaacc gcagtctgca ctccctgatt tgggtgacaca ggagacatac gagcacctgt 360
 tttcacacaa aaccttccca aatccgttcc tcaaggcaaa tatagaattt gagggagagg 420
 gagtaacaac agagagggat gttgatgctg aacacctctt tgcaaaagga aatctggttt 480
 acaacaactg gttttgcaat caggcactat atgcactaga acaagaaaaat tactgtgact 540
 ttgaaataca gttcgaaatt ttgcataatg gaattcattc atgggttggg ggatcaaaga 600
 cccattcaat aggtcatctt cattacgcac catacgatcc actgttctat atccaccatt 660
 cgcagacaga tcgcatttgg gctatctggc aagctctcca ggagcacaga ggtctttcag 720
 ggaaggaagc acactgcgcc ctggagcaaa tgaaagaccc tctcaaacct ttcagctttg 780
 gaagtcctta taatttgaac aaacgcactc aagagttctc caagcctgaa gacacatttg 840
 attatcaccg attcgggtat gattatgatt ccctcgaatt tgttggcatg tctgtttcaa 900
 gtttacataa ctatataaaa caacaacagg aagctgatag agtcttcgca ggattccttc 960
 ttaaaggatt tggacaatca gcatccgtat cgtttgatat ctgcagacca gaccagagtt 1020
 gccaaagagc tggatacttc tcagtctctg gtggaagttc agaaatgccg tggcagtttg 1080
 acaggcttta caagtacgac attacaaaaa cgttgaaaga catgaaactg cgatacgatg 1140
 acacatttac catcaagggt cacataaagg atatagctgg agctgagttg gacagcgatc 1200
 tgattccaac tccttctggt ctccctgaag aaggaaagc 1239

<210> 229
 <211> 191
 <212> DNA
 <213> Megathura crenulata

<400> 229
 atgggatcaa tgtacgtcac gttggctgta atcggattcg tatggaacta tctgaactca 60
 ccgagagaga tctcgccagc ctgaaatctg caatgaggtc tctacaagct gacgatgggg 120
 tgaacgggta tcaagccatt gcatcattcc acggtctccc ggcttcttgt catgatgatg 180
 agggacatga g 191

<210> 230
 <211> 1060
 <212> DNA
 <213> Megathura crenulata

<400> 230
 attgcctggt gtatccacgg aatgccagta tccccacact ggcacaggct ttacaccctg 60
 caaatggaca tggctctggt atctcacgga tctgctggtg ctattccata ctgggactgg 120
 accaaaccta tcagcaaact gcctgatctc ttcaccagcc ctgaatatta cgatccttgg 180
 agggatgcag ttgtcaataa tccatttgct aaaggctaca ttaaaccga ggacgcttac 240
 acggttaggg atcctcagga cattttgtac cacttgcagg acgaaacggg aacatctggt 300
 ttggttagatc aaactctttt agccttagag cagacagatt tctgtgattt tgaggttcaa 360
 tttgaggctg tccataatgc tttcactac ttggtgggtg gtcgacaagt ttatgctctt 420
 tcttctcaac actatgcttc atatgacca gccttcttta ttcactcctc ctttgttgac 480
 aaaatatggg cagtctggca agctctgcaa aagaagagaa agcgtcccta tcataaagcg 540
 gattgtgctc ttaacatgat gaccaaacca atgcgaccat ttgcacacga tttcaatcac 600
 aatggattca caaaaatgca cgcagtcccc aacactctat ttgactttca ggaccttttc 660
 tacacgtatg acaacttaga aattgctggc atgaatgtta atcagttgga agcggaaatc 720
 aaccggcgaa aaagccaaac aagagtcttt gccgggttcc ttctacatgg cattggaaga 780
 tcagctgatg tacgattttg gatttgcaag acagctgacg actgccacgc atctggcatg 840
 atctttatct taggaggttc taaagagatg cactgggcct atgacaggaa ctttaaatatc 900
 gacatcacc c aagctttgaa ggctcagtc atacaccctg aagatgtggt tgacactgat 960

gctcctttct tcattaaagt ggaggtccat ggtgtaaaca agactgctct cccatcttca 1020
gctatcccag cacctactat aatctactca gctgggtaag 1060

<210> 231
<211> 195
<212> DNA
<213> Megathura crenulata

<400> 231
atcatattgc tggcagtggg gtcaggaaaag acgtgacgtc tcttaccgca tctgagatag 60
agaacctgag gcatgctctg caaagcgtga tggatgatga tggacceaat ggattccagg 120
caattgctgc ttatcacgga agtcctccca tgtgtcacat gcctgatggg agagacgttg 180
catgtgtgac tcatg 195

<210> 232
<211> 164
<212> DNA
<213> Megathura crenulata

<400> 232
gaatggcatc tttccctcac tggcacagac tgtttgtgaa acagatggag gatgcactgg 60
ctgcgcatgg agctcacatt ggcataccat actgggattg gacaagtgcg tttagtcatc 120
tgctgcccct agtgactgac cagcagcaca atcccttcca ccac 164

<210> 233
<211> 826
<212> DNA
<213> Megathura crenulata

<400> 233
ggacatatgg ctcatcgga tgtggataga tctcgatctc cgagagacat gctgttcaat 60
gaccccgaa acgggtcaga atcattcttc tatagacagg ttctcttggc tctagaacag 120
acagacttct gccaatgtga agttcagttt gaaataaac acaatgcaat ccaactcttg 180
actggaggac atactccata tggaaatgtca tcaactggaat atacagcata tgatccactc 240
ttttatctcc accattccaa cactgatcgt atctgggcca tctggcaggc actccagaaa 300
tacagagggt ttcaatacaa cgcagctcat tgcatatcc aggttctgaa acaacctctt 360
aaaccattca gcgagtccag gaatccaaac ccagtcacca gagccaattc tagggcagtc 420
gattcatttg attatgagag actcaattat caatatgaca cacttacctt ccacggacat 480
tctatctcag aacttgatgc catgcttcaa gagagaaaaga aggaagagag aacatttgca 540
gccttctgtg tgcacggatt tggcgccagt gctgatgttt cgtttgatgt ctgcacacct 600
gatggtcatt gtgcctttgc tggaaacctc gcggtacttg gtggggagct tgagatgccc 660
tggtcctttg aaagattgtt ccgttacgat atcaciaaagg ttctcaagca gatgaatctt 720
cactatgatt ctgagttcca ctttgagttg aagattgttg gcacagatgg aacagaactg 780
ccatcgatc gtatcaagag ccctaccatt gaacaccatg gagggag 826

<210> 234
<211> 316
<212> PRT
<213> Megathura crenulata

<400> 234
Gly Leu Pro Tyr Trp Asp Trp Thr Met Pro Met Ser His Leu Pro Glu
1 5 10 15
Leu Ala Thr Ser Glu Thr Tyr Leu Asp Pro Val Thr Gly Glu Thr Lys
20 25 30
Asn Asn Pro Phe His His Ala Gln Val Ala Phe Glu Asn Gly Val Thr
35 40 45

Ser Arg Asn Pro Asp Ala Lys Leu Phe Met Lys Pro Thr Tyr Gly Asp
 50 55 60
 His Thr Tyr Leu Phe Asp Ser Met Ile Tyr Ala Phe Glu Gln Glu Asp
 65 70 75 80
 Phe Cys Asp Phe Glu Val Gln Tyr Glu Leu Thr His Asn Ala Ile His
 85 90 95
 Ala Trp Val Gly Gly Ser Glu Lys Tyr Ser Met Ser Ser Leu His Tyr
 100 105 110
 Thr Ala Phe Asp Pro Ile Phe Tyr Leu His His Ser Asn Val Asp Arg
 115 120 125
 Leu Trp Ala Ile Trp Gln Ala Leu Gln Ile Arg Arg Gly Lys Ser Tyr
 130 135 140
 Lys Ala His Cys Ala Ser Ser Gln Glu Arg Glu Pro Leu Lys Pro Phe
 145 150 155 160
 Ala Phe Ser Ser Pro Leu Asn Asn Asn Glu Lys Thr Tyr His Asn Ser
 165 170 175
 Val Pro Thr Asn Val Tyr Asp Tyr Val Gly Val Leu His Tyr Arg Tyr
 180 185 190
 Asp Asp Leu Gln Phe Gly Gly Met Thr Met Ser Glu Leu Glu Glu Tyr
 195 200 205
 Ile His Lys Gln Thr Gln His Asp Arg Thr Phe Ala Gly Phe Phe Leu
 210 215 220
 Ser Tyr Ile Gly Thr Ser Ala Ser Val Asp Ile Phe Ile Asn Arg Glu
 225 230 235 240
 Gly His Asp Lys Tyr Lys Val Gly Ser Phe Val Val Leu Gly Gly Ser
 245 250 255
 Lys Glu Met Lys Trp Gly Phe Asp Arg Met Tyr Lys Tyr Glu Ile Thr
 260 265 270
 Glu Ala Leu Lys Thr Leu Asn Val Ala Val Asp Asp Gly Phe Ser Ile
 275 280 285
 Thr Val Glu Ile Thr Asp Val Asp Gly Ser Pro Pro Ser Ala Asp Leu
 290 295 300
 Ile Pro Pro Pro Ala Ile Ile Phe Asp Val Val Arg
 305 310 315

<210> 235

<211> 416

<212> PRT

<213> Megathura crenulata

<400> 235

Ala Asp Ala Lys Asp Phe Gly His Ser Arg Lys Ile Arg Lys Ala Val
 1 5 10 15

Asp Ser Leu Thr Val Glu Glu Gln Thr Ser Leu Arg Arg Ala Met Ala
 20 25 30
 Asp Leu Gln Asp Asp Lys Thr Ser Gly Gly Phe Gln Gln Ile Ala Ala
 35 40 45
 Phe His Gly Glu Pro Lys Trp Cys Pro Ser Pro Glu Ala Glu Lys Lys
 50 55 60
 Phe Ala Cys Cys Val His Gly Met Ala Val Phe Pro His Trp His Arg
 65 70 75 80
 Leu Leu Thr Val Gln Gly Glu Asn Ala Leu Arg Lys His Gly Phe Thr
 85 90 95
 Gly Gly Leu Pro Tyr Trp Asp Trp Thr Arg Pro Met Ser Ala Leu Pro
 100 105 110
 His Phe Val Ala Asp Pro Thr Tyr Asn Asp Ser Val Ser Ser Leu Glu
 115 120 125
 Glu Asp Asn Pro Trp Tyr His Gly His Ile Asp Ser Val Gly His Asp
 130 135 140
 Thr Thr Arg Ala Val Arg Asp Asp Leu Tyr Gln Ser Pro Gly Phe Gly
 145 150 155 160
 His Tyr Thr Asp Ile Ala Lys Gln Val Leu Leu Ala Phe Glu Gln Asp
 165 170 175
 Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Ile Ala His Asn Phe Ile
 180 185 190
 His Ala Leu Val Gly Gly Asn Glu Pro Tyr Ser Met Ser Ser Leu Arg
 195 200 205
 Tyr Thr Thr Tyr Asp Pro Ile Phe Phe Leu His Arg Ser Asn Thr Asp
 210 215 220
 Arg Leu Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Lys Pro
 225 230 235 240
 Tyr Asn Thr Ala Asn Cys Ala Ile Ala Ser Met Arg Lys Pro Leu Gln
 245 250 255
 Pro Phe Gly Leu Asp Ser Val Ile Asn Pro Asp Asp Glu Thr Arg Glu
 260 265 270
 His Ser Val Pro Phe Arg Val Phe Asp Tyr Lys Asn Asn Phe Asp Tyr
 275 280 285
 Glu Tyr Glu Ser Leu Ala Phe Asn Gly Leu Ser Ile Ala Gln Leu Asp
 290 295 300
 Arg Glu Leu Gln Arg Arg Lys Ser His Asp Arg Val Phe Ala Gly Phe
 305 310 315 320
 Leu Leu His Glu Ile Gly Gln Ser Ala Leu Val Lys Phe Tyr Val Cys
 325 330 335

Lys His Asn Val Ser Asp Cys Asp His Tyr Ala Gly Glu Phe Tyr Ile
 340 345 350
 Leu Gly Asp Glu Ala Glu Met Pro Trp Arg Tyr Asp Arg Val Tyr Lys
 355 360 365
 Tyr Glu Ile Thr Gln Gln Leu His Asp Leu Asp Leu His Val Gly Asp
 370 375 380
 Asn Phe Phe Leu Lys Tyr Glu Ala Phe Asp Leu Asn Gly Gly Ser Leu
 385 390 395 400
 Gly Gly Ser Ile Phe Ser Gln Pro Ser Val Ile Phe Glu Pro Ala Ala
 405 410 415

<210> 236
 <211> 419
 <212> PRT
 <213> Megathura crenulata

<400> 236
 Gly Ser His Gln Ala Asp Glu Tyr Arg Glu Ala Val Thr Ser Ala Ser
 1 5 10 15
 His Ile Arg Lys Asn Ile Arg Asp Leu Ser Glu Gly Glu Ile Glu Ser
 20 25 30
 Ile Arg Ser Ala Phe Leu Gln Ile Gln Lys Glu Gly Ile Tyr Glu Asn
 35 40 45
 Ile Ala Lys Phe His Gly Lys Pro Gly Leu Cys Glu His Asp Gly His
 50 55 60
 Pro Val Ala Cys Cys Val His Gly Met Pro Thr Phe Pro His Trp His
 65 70 75 80
 Arg Leu Tyr Val Leu Gln Val Glu Asn Ala Leu Leu Glu Arg Gly Ser
 85 90 95
 Ala Val Ala Val Pro Tyr Trp Asp Trp Thr Glu Lys Ala Asp Ser Leu
 100 105 110
 Pro Ser Leu Ile Asn Asp Ala Thr Tyr Phe Asn Ser Arg Ser Gln Thr
 115 120 125
 Phe Asp Pro Asn Pro Phe Phe Arg Gly His Ile Ala Phe Glu Asn Ala
 130 135 140
 Val Thr Ser Arg Asp Pro Gln Pro Glu Leu Trp Asp Asn Lys Asp Phe
 145 150 155 160
 Tyr Glu Asn Val Met Leu Ala Leu Glu Gln Asp Asn Phe Cys Asp Phe
 165 170 175
 Glu Ile Gln Leu Glu Leu Ile His Asn Ala Leu His Ser Arg Leu Gly
 180 185 190

Gly Arg Ala Lys Tyr Ser Leu Ser Ser Leu Asp Tyr Thr Ala Phe Asp
 195 200 205
 Pro Val Phe Phe Leu His His Ala Asn Val Asp Arg Ile Trp Ala Ile
 210 215 220
 Trp Gln Asp Leu Gln Arg Tyr Arg Lys Lys Pro Tyr Asn Glu Ala Asp
 225 230 235 240
 Cys Ala Val Asn Glu Met Arg Lys Pro Leu Gln Pro Phe Asn Asn Pro
 245 250 255
 Glu Leu Asn Ser Asp Ser Met Thr Leu Lys His Asn Leu Pro Gln Asp
 260 265 270
 Ser Phe Asp Tyr Gln Asn Arg Phe Arg Tyr Gln Tyr Asp Asn Leu Gln
 275 280 285
 Phe Asn His Phe Ser Ile Gln Lys Leu Asp Gln Thr Ile Gln Ala Arg
 290 295 300
 Lys Gln His Asp Arg Val Phe Ala Gly Phe Ile Leu His Asn Ile Gly
 305 310 315 320
 Thr Ser Ala Val Val Asp Ile Tyr Ile Cys Val Glu Gln Gly Gly Glu
 325 330 335
 Gln Asn Cys Lys Thr Lys Ala Gly Ser Phe Thr Ile Leu Gly Gly Glu
 340 345 350
 Thr Glu Met Pro Phe His Phe Asp Arg Leu Tyr Lys Phe Asp Ile Thr
 355 360 365
 Ser Ala Leu His Lys Leu Gly Val Pro Leu Asp Gly His Gly Phe Asp
 370 375 380
 Ile Lys Val Asp Val Arg Ala Val Asn Gly Ser His Leu Asp Gln His
 385 390 395 400
 Ile Leu Asn Glu Pro Ser Leu Leu Phe Val Pro Gly Glu Arg Lys Asn
 405 410 415
 Ile Tyr Tyr

<210> 237
 <211> 413
 <212> PRT
 <213> Megathura crenulata

<400> 237
 Asp Gly Leu Ser Gln His Asn Leu Val Arg Lys Glu Val Ser Ser Leu
 1 5 10 15
 Thr Thr Leu Glu Lys His Phe Leu Arg Lys Ala Leu Lys Asn Met Gln
 20 25 30
 Ala Asp Asp Ser Pro Asp Gly Tyr Gln Ala Ile Ala Ser Phe His Ala
 35 40 45

Leu Pro Pro Leu Cys Pro Ser Pro Ser Ala Ala His Arg His Ala Cys
 50 55 60
 Cys Leu His Gly Met Ala Thr Phe Pro Gln Trp His Arg Leu Tyr Thr
 65 70 75 80
 Val Gln Phe Glu Asp Ser Leu Lys Arg His Gly Ser Ile Val Gly Leu
 85 90 95
 Pro Tyr Trp Asp Trp Leu Lys Pro Gln Ser Ala Leu Pro Asp Leu Val
 100 105 110
 Thr Gln Glu Thr Tyr Glu His Leu Phe Ser His Lys Thr Phe Pro Asn
 115 120 125
 Pro Phe Leu Lys Ala Asn Ile Glu Phe Glu Gly Glu Gly Val Thr Thr
 130 135 140
 Glu Arg Asp Val Asp Ala Glu His Leu Phe Ala Lys Gly Asn Leu Val
 145 150 155 160
 Tyr Asn Asn Trp Phe Cys Asn Gln Ala Leu Tyr Ala Leu Glu Gln Glu
 165 170 175
 Asn Tyr Cys Asp Phe Glu Ile Gln Phe Glu Ile Leu His Asn Gly Ile
 180 185 190
 His Ser Trp Val Gly Gly Ser Lys Thr His Ser Ile Gly His Leu His
 195 200 205
 Tyr Ala Ser Tyr Asp Pro Leu Phe Tyr Ile His His Ser Gln Thr Asp
 210 215 220
 Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Glu His Arg Gly Leu Ser
 225 230 235 240
 Gly Lys Glu Ala His Cys Ala Leu Glu Gln Met Lys Asp Pro Leu Lys
 245 250 255
 Pro Phe Ser Phe Gly Ser Pro Tyr Asn Leu Asn Lys Arg Thr Gln Glu
 260 265 270
 Phe Ser Lys Pro Glu Asp Thr Phe Asp Tyr His Arg Phe Gly Tyr Glu
 275 280 285
 Tyr Asp Ser Leu Glu Phe Val Gly Met Ser Val Ser Ser Leu His Asn
 290 295 300
 Tyr Ile Lys Gln Gln Gln Glu Ala Asp Arg Val Phe Ala Gly Phe Leu
 305 310 315 320
 Leu Lys Gly Phe Gly Gln Ser Ala Ser Val Ser Phe Asp Ile Cys Arg
 325 330 335
 Pro Asp Gln Ser Cys Gln Glu Ala Gly Tyr Phe Ser Val Leu Gly Gly
 340 345 350
 Ser Ser Glu Met Pro Trp Gln Phe Asp Arg Leu Tyr Lys Tyr Asp Ile
 355 360 365

Thr Lys Thr Leu Lys Asp Met Lys Leu Arg Tyr Asp Asp Thr Phe Thr
 370 375 380

Ile Lys Val His Ile Lys Asp Ile Ala Gly Ala Glu Leu Asp Ser Asp
 385 390 395 400

Leu Ile Pro Thr Pro Ser Val Leu Leu Glu Glu Gly Lys
 405 410

<210> 238

<211> 417

<212> PRT

<213> Megathura crenulata

<400> 238

His Gly Ile Asn Val Arg His Val Gly Arg Asn Arg Ile Arg Met Glu
 1 5 10 15

Leu Ser Glu Leu Thr Glu Arg Asp Leu Ala Ser Leu Lys Ser Ala Met
 20 25 30

Arg Ser Leu Gln Ala Asp Asp Gly Val Asn Gly Tyr Gln Ala Ile Ala
 35 40 45

Ser Phe His Gly Leu Pro Ala Ser Cys His Asp Asp Glu Gly His Glu
 50 55 60

Ile Ala Cys Cys Ile His Gly Met Pro Val Phe Pro His Trp His Arg
 65 70 75 80

Leu Tyr Thr Leu Gln Met Asp Met Ala Leu Leu Ser His Gly Ser Ala
 85 90 95

Val Ala Ile Pro Tyr Trp Asp Trp Thr Lys Pro Ile Ser Lys Leu Pro
 100 105 110

Asp Leu Phe Thr Ser Pro Glu Tyr Tyr Asp Pro Trp Arg Asp Ala Val
 115 120 125

Val Asn Asn Pro Phe Ala Lys Gly Tyr Ile Lys Ser Glu Asp Ala Tyr
 130 135 140

Thr Val Arg Asp Pro Gln Asp Ile Leu Tyr His Leu Gln Asp Glu Thr
 145 150 155 160

Gly Thr Ser Val Leu Leu Asp Gln Thr Leu Leu Ala Leu Glu Gln Thr
 165 170 175

Asp Phe Cys Asp Phe Glu Val Gln Phe Glu Val Val His Asn Ala Ile
 180 185 190

His Tyr Leu Val Gly Gly Arg Gln Val Tyr Ala Leu Ser Ser Gln His
 195 200 205

Tyr Ala Ser Tyr Asp Pro Ala Phe Phe Ile His His Ser Phe Val Asp
 210 215 220

Lys Ile Trp Ala Val Trp Gln Ala Leu Gln Lys Lys Arg Lys Arg Pro
 225 230 235 240

Tyr His Lys Ala Asp Cys Ala Leu Asn Met Met Thr Lys Pro Met Arg
 245 250 255
 Pro Phe Ala His Asp Phe Asn His Asn Gly Phe Thr Lys Met His Ala
 260 265 270
 Val Pro Asn Thr Leu Phe Asp Phe Gln Asp Leu Phe Tyr Thr Tyr Asp
 275 280 285
 Asn Leu Glu Ile Ala Gly Met Asn Val Asn Gln Leu Glu Ala Glu Ile
 290 295 300
 Asn Arg Arg Lys Ser Gln Thr Arg Val Phe Ala Gly Phe Leu Leu His
 305 310 315 320
 Gly Ile Gly Arg Ser Ala Asp Val Arg Phe Trp Ile Cys Lys Thr Ala
 325 330 335
 Asp Asp Cys His Ala Ser Gly Met Ile Phe Ile Leu Gly Gly Ser Lys
 340 345 350
 Glu Met His Trp Ala Tyr Asp Arg Asn Phe Lys Tyr Asp Ile Thr Gln
 355 360 365
 Ala Leu Lys Ala Gln Ser Ile His Pro Glu Asp Val Phe Asp Thr Asp
 370 375 380
 Ala Pro Phe Phe Ile Lys Val Glu Val His Gly Val Asn Lys Thr Ala
 385 390 395 400
 Leu Pro Ser Ser Ala Ile Pro Ala Pro Thr Ile Ile Tyr Ser Ala Gly
 405 410 415

Glu

<210> 239
 <211> 395
 <212> PRT
 <213> Megathura crenulata

<400> 239
 Asp His Ile Ala Gly Ser Gly Val Arg Lys Asp Val Thr Ser Leu Thr
 1 5 10 15
 Ala Ser Glu Ile Glu Asn Leu Arg His Ala Leu Gln Ser Val Met Asp
 20 25 30
 Asp Asp Gly Pro Asn Gly Phe Gln Ala Ile Ala Ala Tyr His Gly Ser
 35 40 45
 Pro Pro Met Cys His Met Pro Asp Gly Arg Asp Val Ala Cys Cys Thr
 50 55 60
 His Gly Met Ala Ser Phe Pro His Trp His Arg Leu Phe Val Lys Gln
 65 70 75 80
 Met Glu Asp Ala Leu Ala Ala His Gly Ala His Ile Gly Ile Pro Tyr
 85 90 95

Trp Asp Trp Thr Ser Ala Phe Ser His Leu Pro Ala Leu Val Thr A
 100 105 110

His Glu His Asn Pro Phe His His Gly His Ile Ala His Arg Asn Val
 115 120 125

Asp Thr Ser Arg Ser Pro Arg Asp Met Leu Phe Asn Asp Pro Glu His
 130 135 140

Gly Ser Glu Ser Phe Phe Tyr Arg Gln Val Leu Leu Ala Leu Glu Gln
 145 150 155 160

Thr Asp Phe Cys Gln Phe Glu Val Gln Phe Glu Ile Thr His Asn Ala
 165 170 175

Ile His Ser Trp Thr Gly Gly His Thr Pro Tyr Gly Met Ser Ser Leu
 180 185 190

Glu Tyr Thr Ala Tyr Asp Pro Leu Phe Tyr Leu His His Ser Asn Thr
 195 200 205

Asp Arg Ile Trp Ala Ile Trp Gln Ala Leu Gln Lys Tyr Arg Gly Phe
 210 215 220

Gln Tyr Asn Ala Ala His Cys Asp Ile Gln Val Leu Lys Gln Pro Leu
 225 230 235 240

Lys Pro Phe Ser Glu Ser Arg Asn Pro Asn Pro Val Thr Arg Ala Asn
 245 250 255

Ser Arg Ala Val Asp Ser Phe Asp Tyr Glu Arg Leu Asn Tyr Gln Tyr
 260 265 270

Asp Thr Leu Thr Phe His Gly His Ser Ile Ser Glu Leu Asp Ala Met
 275 280 285

Leu Gln Glu Arg Lys Lys Glu Glu Arg Thr Phe Ala Ala Phe Leu Leu
 290 295 300

His Gly Phe Gly Ala Ser Ala Asp Val Ser Phe Asp Val Cys Thr Pro
 305 310 315 320

Asp Gly His Cys Ala Phe Ala Gly Thr Phe Ala Val Leu Gly Gly Glu
 325 330 335

Leu Glu Met Pro Trp Ser Phe Glu Arg Leu Phe Arg Tyr Asp Ile Thr
 340 345 350

Lys Val Leu Lys Gln Met Asn Leu His Tyr Asp Ser Glu Phe His Phe
 355 360 365

Glu Leu Lys Ile Val Gly Thr Asp Gly Thr Glu Leu Pro Ser Asp Arg
 370 375 380

Ile Lys Ser Pro Thr Ile Glu His His Gly Gly
 385 390 395